

THE
ARCHITECT
& BUILDING NEWS

The Week's Work

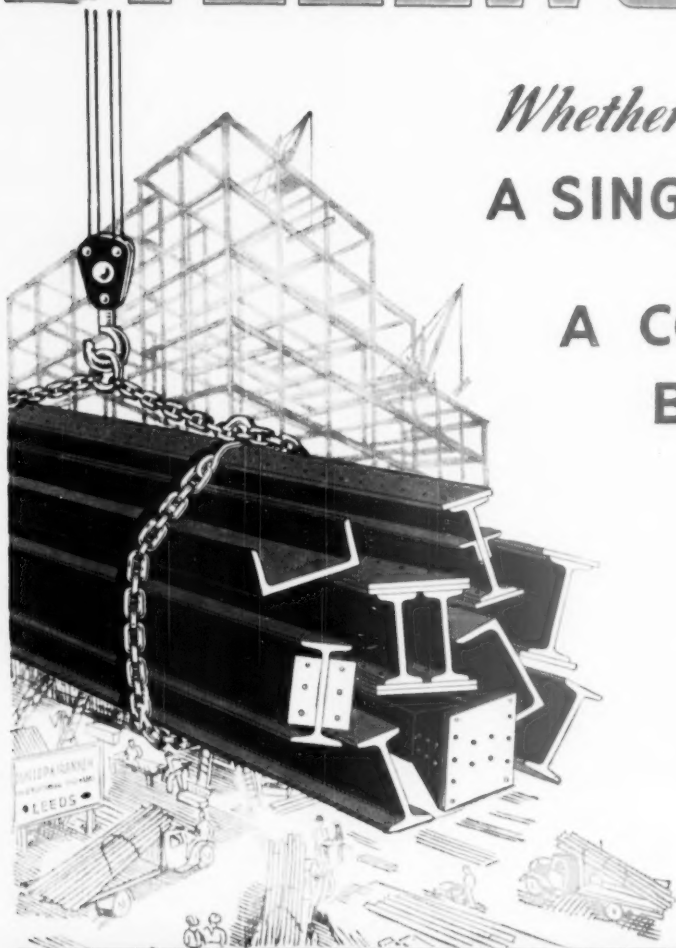
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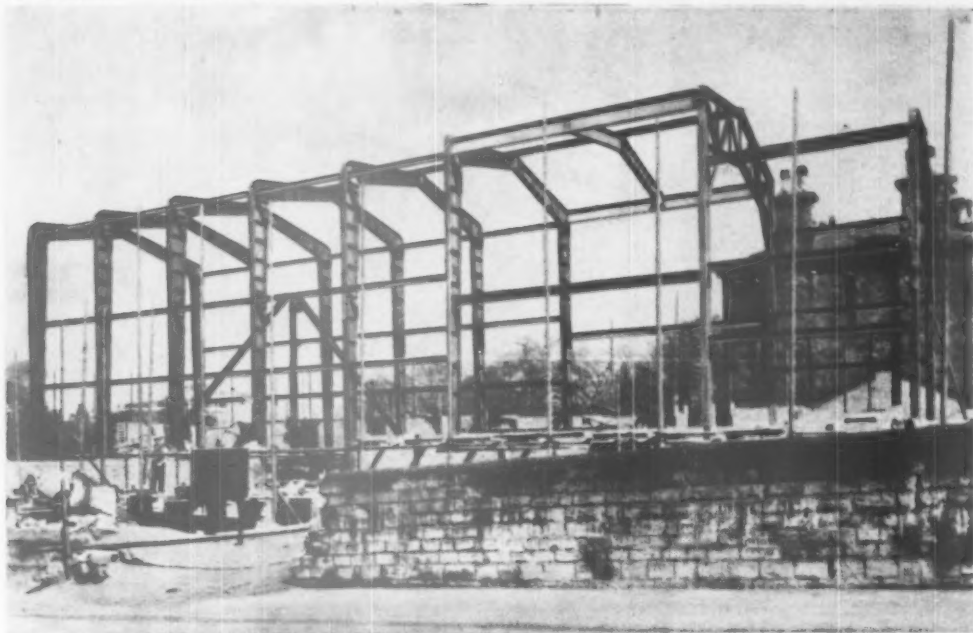
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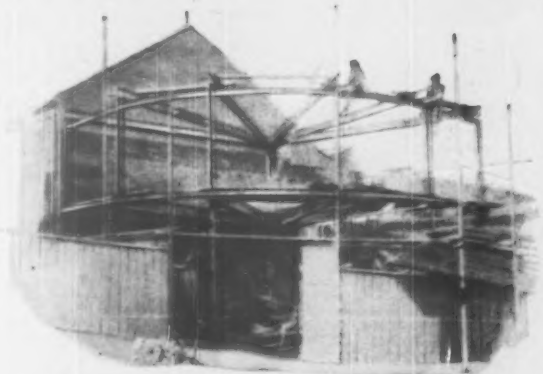


A Steel-framed Church

A lofty, open building such as this church benefits greatly from the characteristic form of the steel three-pin arch.

The structure is simplified and traditional, yet with a considerable freedom of architectural treatment. The top articulation of the half-arches can just be seen in the illustration.

Right: a contrast; an ingenious structure for a corner shop with six beams radiating from a single stanchion.



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The age of Reason

The reign of Queen Anne saw an England convinced in the power of man. All that was worth knowing had been discovered by the new learning of science. Art and life were finely balanced — poetry was satirical; prose, polished and urbane. Contentment and propriety are the key-notes of its buildings, beautiful in their proportions. Architects, in the tradition of Inigo Jones and Wren built many

houses of reasonable size that were comfortable and convenient.

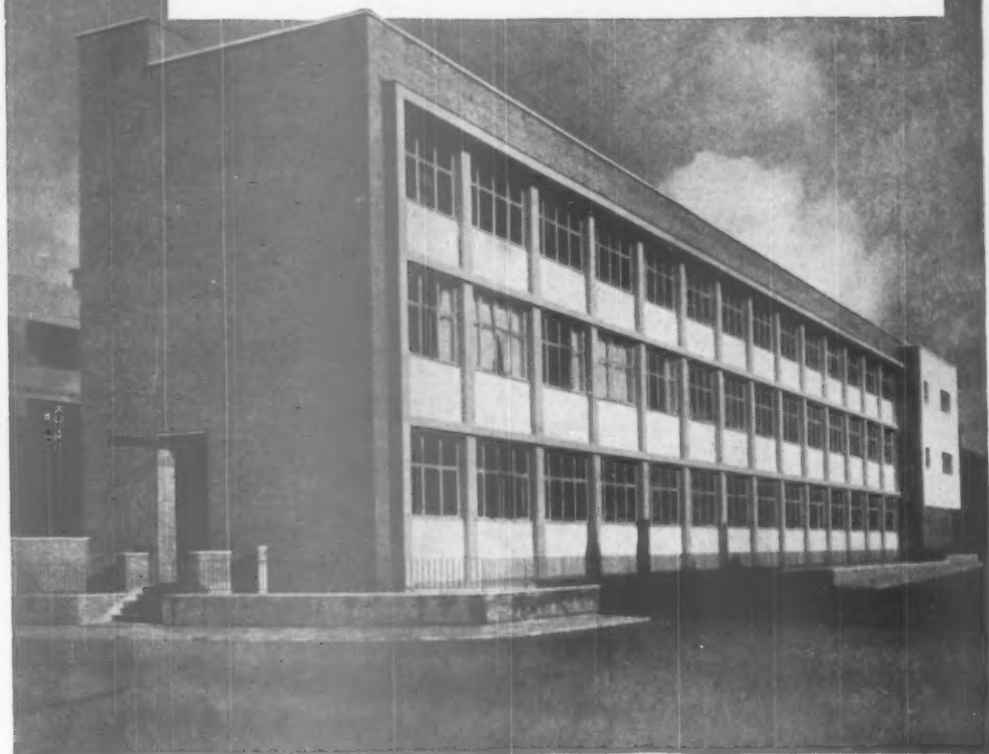
The excesses of a later age, when houses were built for show and slavish imitations of neo-classic rules were in fashion, have now passed and a new Age of Reason has begun in architecture. Where beauty and utility again combine, Celotex will have a part to play of the first importance.

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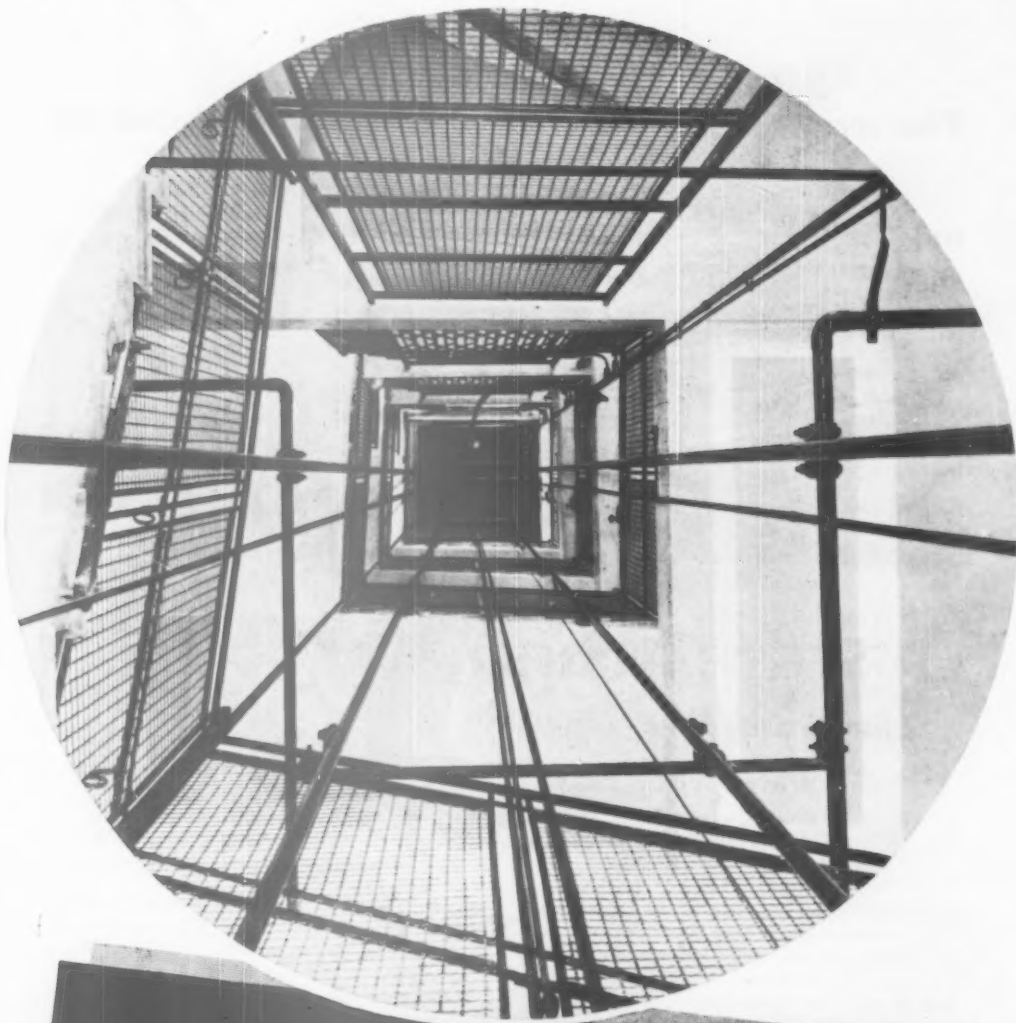


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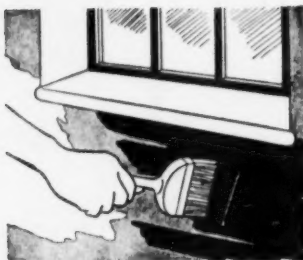
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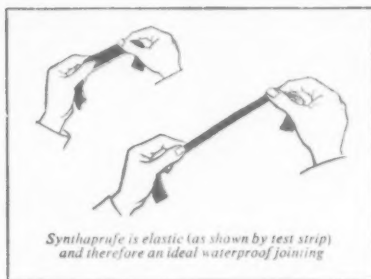


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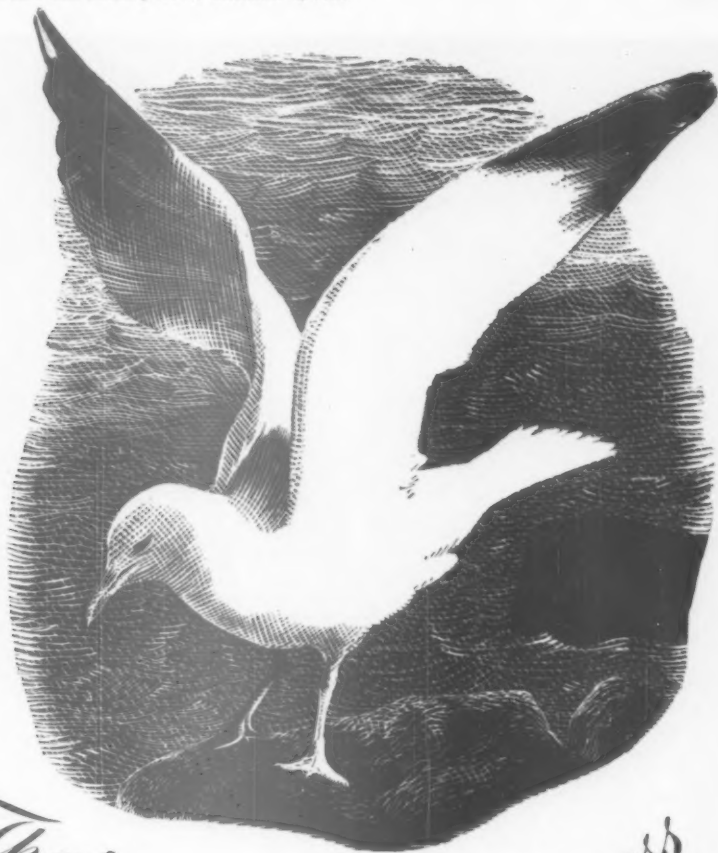
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Pimlico polygon...

**a hot water accumulator that delights the eye!
A 16-sided tower glazed by Aluminex Patent Glazing houses the hot water accumulator of the Pimlico District Heating Scheme of the Westminster City Council.**

When a hot water accumulator tank 29 ft. in diameter and 126 ft. high is set cheek by jowl with blocks of new flats, something special, obviously has to be done about its appearance. Something, indeed, has been done, and to some purpose, to the hot water accumulator of the Pimlico District heating scheme. The remarkable photographs in these pages show how Aluminex Patent Glazing was used in accomplishing these three prime requirements of:

- 1 — providing an aesthetic finish;
- 2 — protecting the accumulator and its lagging;
- 3 — providing a measure of additional heat insulation.

In particular the architects desired that the accumulator enclosure should have a light and airy appearance and harmonise with the design of the flats in the surrounding estate.

It was with these considerations in mind that they chose Aluminex Patent Glazing—the modern, all-aluminium system—for the tower cladding. The Architects built round the accumulator a 16-sided steel tower glazed with rough cast glass panes, 6 ft. \times 1 ft 9 ins., set in Aluminex patent glazing bars.

These are the normal Aluminex glazing bars as used in the Brabazon Assembly Hall, motor factories, steel works and other industrial structures large and small.

In this application of versatile Aluminex however, the tee-shaped glazing bars have been set to face inwards. This permitted the glazing to be placed from the inside, doing away with the need for scaffolding. Moreover this arrangement suited the wind conditions for the wind suction is much greater than pressure.

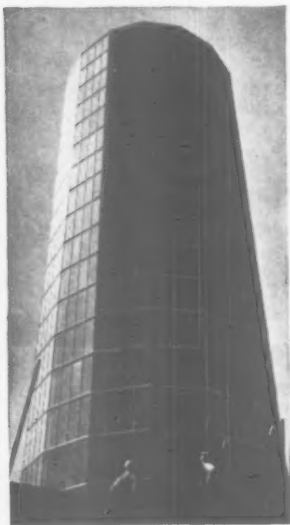
The manufacturers of Aluminex, Williams & Williams Ltd., carried out tests showing that the glass would not break until a suction of 65 lbs. per square foot was reached and that the Aluminex continuous spring glazing strip inside would not give way under a pulsating outside pressure varying up to a maximum of 45 lbs. per square foot. It was therefore clear that there was an ample margin of safety, since the maximum design suction is 50 lbs. per square foot and the maximum design pressure is 30 lbs. per square foot.

It is, however, from the point of view of appearance that the choice of Aluminex has been so notably justified. Aluminex is essentially a neat and precise glazing system. The bars are extruded to a design which represents the strictest adaptation of shape to function. The Aluminex engineers who designed it re-thought "dry glazing" from basic principles. The components and fixings are equally simple, efficient and functional. The result is that, in such structures as the

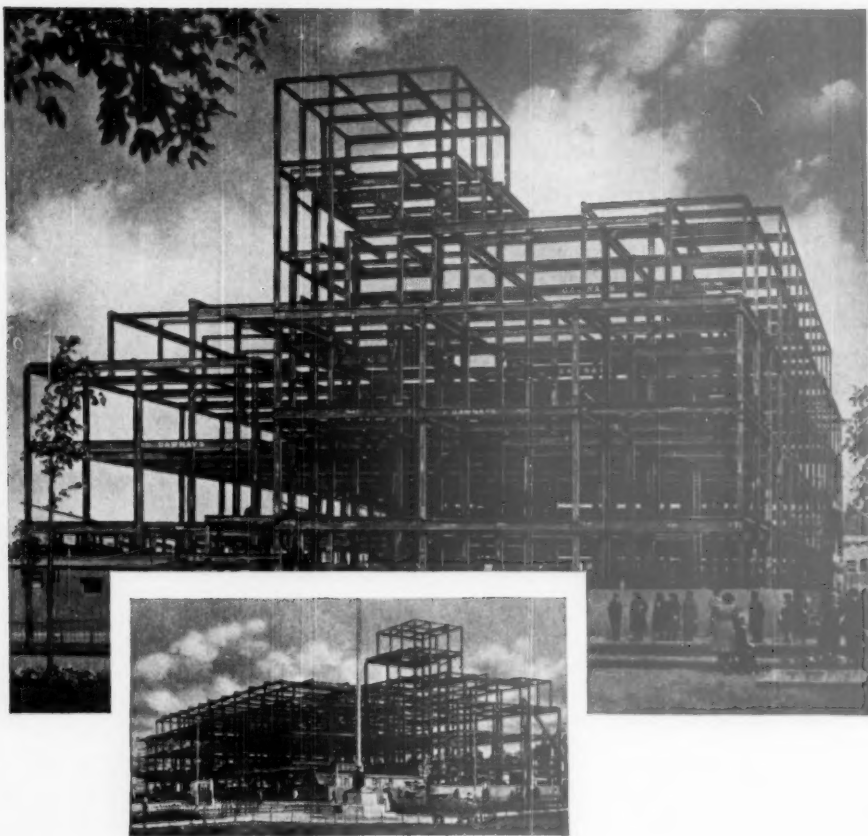
Pimlico tower, when clean, precise lines play an important part in the aesthetic effect of the finished building, Aluminex presents invaluable advantages.

Aluminex Division of Williams & Williams Ltd., Reliance Works, Chester

Architects: Messrs. Powell and Moya, A.A.R.I.B.A. Chartered Civil Engineers: Messrs. Scott & Wilson. Consulting Engineers: Messrs. Kennedy & Dunkin



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Architects: Sir J. Burnet Tait & Partners :: Consulting Engineers: John F. Farquharson & Partners

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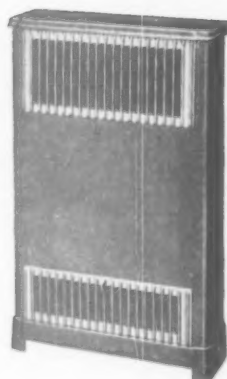
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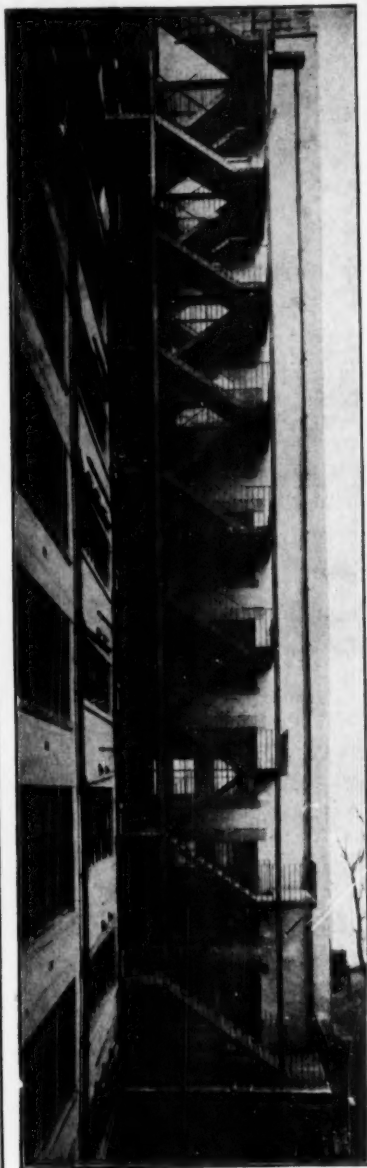
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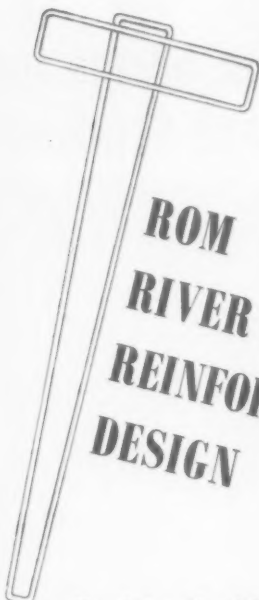
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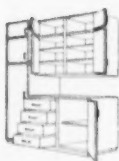
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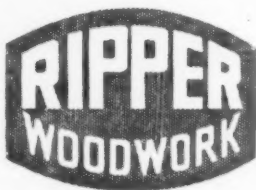
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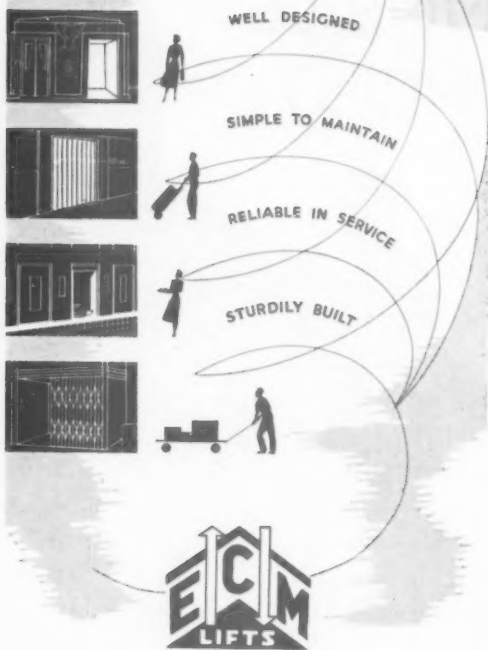
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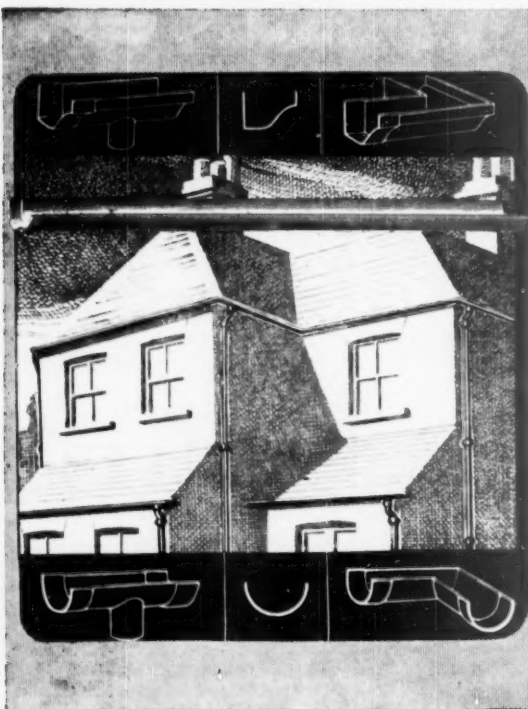
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THE
ARCHITECT
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December 8, 1950.

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THE TWO REPORTS DISCUSSED

THE R.I.B.A. devoted its last general meeting to a discussion of the two Reports on the Building Industry and its Productivity.* Comments and questions ranged over the subjects of the education of professional and technical people, over drawings and quantities, sub-contracts and site-organization. This discussion was singularly free of political bias or rancour, though once or twice the prevailing neutrality of colour glowed slightly more pink or blue; but generally fundamental issues of economics and cold wars—on the international plane—and of private and public enterprise—on the national welfare plane—were left outside; the comments and criticisms were kept to technical matters. Perhaps, as the meeting was within the walls of a learned professional headquarters, this was as it should be; but, even so, the wider background is still there and it worries many architects, if not builders, in the midst of post-war frustration of high costs and material shortages.

Many of the analytical comments—they were scarcely criticisms—cancelled out. There was a slight tendency to criticise the client—the "promoter"—and to ask that he be educated, as well as the technician, in his duties to the job. There was rather stronger inclination to blame the builder for lack of organization, with its consequent "pricing of the industry out of the market."

High costs are, as has been amply demonstrated in several places, due to the high cost of materials and of their distribution, to the existence of restrictive practices and to the slowness of building work, and not to the high rates of wages or to excessive profits taken from the industry. It was well shown that it is because of very high wages in the U.S.A. that site and office organization are so efficient and the speeds of erection so high in that country. We, on the other

hand, tend to waste labour because its costs tend to be less than that of other factors.

Some younger voices were raised to question what is likely to be the effect on Architecture itself, if it is mainly to be done by the State or the local authorities or if its speed of execution is so boosted by new methods, materials, and components. This is a serious side of the matter that is nearly always glossed over—it was at the R.I.B.A. If we cannot hold on to the art of our building and develop it as an expression of thought and civilization, what profiteth our "pre-planning" and super-organization and speed or even our "productivity"? Or is it essential that we go back to the mere shelter idea before we go forward again?

Certain things came out of the discussion which are important to the whole industry. The R.I.B.A. has got the Ministry of Health to agree to review the possibility of a national unification of bye-laws, with the introduction of modifications and improvements wherever possible.

The work of the post-report *ad hoc* committee set up by the Institute was reviewed with its discussions on subjects arising from the Reports which affect the industry and the professions jointly and, in particular, the education of architect and builder-executant and the organization of production in all its stages. It is to be hoped that the formal findings from these further examinations will be published in some handy manner to all parties concerned. It would be interesting to know if similar committees have been set up by the builders, the sub-contractors and the quantity surveyors; naturally the Reports have been examined by their respective Councils, but if the inquiries continue, would it not be as well to get the four parties together again to compare notes—to continue the working party forward to definite and lasting conclusions from which to progress into a more prosperous future? The essence of both Reports can be summed up as "co-operation" by all parties—but it must be continuous if it is to be of real and lasting use.

*The Anglo-American Council on Productivity: Building Team, 1948 (Report, 1950. 2/6). The Ministry of Works Working Party on Building: 1948 (Report, 1950. 2/6).

NOISE

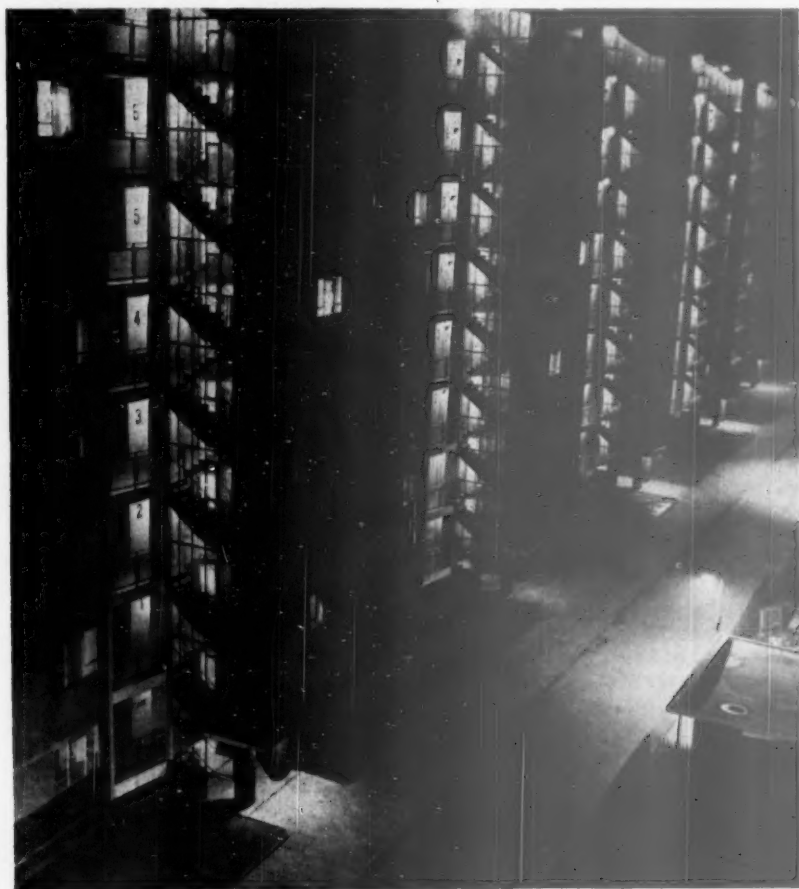
Last week Lord Horder read a paper to the Royal Society of Arts with the title of "Cities Without Noise." It was an excellent summing-up of the present state of post-war sensitivity towards the noise of our streets, houses and workshops. The speaker pointed out how much ground we had gained up to the outbreak of war in 1939, how much we had lost during the war and reviewed the recovery of ground since the war ended.

The paper was punctuated with quiet humour that ranged from the subjects of beards and corduroys belonging to the owners of unsilenced cars and motorcycles to the distance to be maintained by porcupines for effective comfort in living. The paper was also something of a swan-song of the Noise Abatement League—recently absorbed into the activities of the Royal Institute of Public Health and Hygiene—a body

which did so much between the wars to bring about reduction of noise in our streets.

Lord Horder's remarks about the effect of noise on the human nervous system with its consequent lowering of resistance to disease, especially during childhood, were weighty and of the nature of warnings. He pointed out also that practically nothing more has been done since the war to lessen noise in the underground tube railways or to silence road works. A curious omission from the paper was any reference to the new and increasing menace of noise from airplanes—a subject which scientific specialists tell us is being actively pursued, but about which singularly few results are forthcoming.

The elimination of heedless noise "can only come about," in the words of Lord Horder, "by a general recognition of the fact that it is a form of selfishness and lack of thought . . . the man in the street . . . must get it into his head that making a noise that is not necessary is a form of bad manners."



Night time at the Pimlico flats, illustrated in this issue.

EVENTS AND COMMENTS

THE "MANCHESTER GUARDIAN"

A CORRESPONDENT chides me for missing the account of the new L.C.C. flats in the *Manchester Guardian* and points out that that august journal gave more space to the project than did the A. & B.N. Mine was, as I said, a preliminary notice. There is a full report in this issue.

I have frequently commented on the lively interest which the *Manchester Guardian* takes in architectural matters and I am sorry that I did not credit it with having noticed the Putney flats.

THE WILLIAM HOFFMAN WOOD TRUST

WILLIAM Hoffman Wood, a Leeds architect and quantity surveyor, died in 1933 leaving the bulk of his estate to provide scholarships for Yorkshire born architects. He also founded awards for architectural drawing, painting and sculpture—the Leeds Medal—and the relief of pain and suffering—the Addingham Gold Medal. The Leeds medal has this year been won by Barbara Hepworth with a work in blue limestone. The two architectural scholarships were won by Mr. E. Whiteley, of Doncaster (£250) and Mr. David Booth, of Uppermill, near Oldham (£150).

The Yorkshire medal for the best invention of the year "in no way connected with warfare" was awarded to Mr. Richard Baines, of Penrith, for his solid fuel burning reflector fire.

Yorkshire will remember Mr. Hoffman Wood with gratitude; he set an example which other architects with fortunes and without dependants might like to follow.

HONG KONG BUILDING CENTRE

THE Board of Trade announces that a meeting was recently held in Hong Kong to discuss the formation of a building centre there on the lines of "similar institutions in large cities in England and America, and set up a permanent exhibition and sales room where every type of building material and product could not only be placed on display but demonstrated and tested under working conditions."

I should have thought that the Board of Trade would have known that there is only one Building Centre in England, one in Scotland and one in America—the Architects' Samples Bureau in Washington. Furthermore the statement does not seem to appreciate the main object of the building centre, an object which applies equally well in London, Glasgow, Rotterdam, Paris, Copenhagen, Stockholm and Zurich, and that is that the exhibition provides a place where architects and others interested may see and examine building materials and equipment without being bothered with sales talk and "follow up" letters.

Since the war there has been talk of the formation of building centres in several countries but as far as I know the Bowentrum is the only new one. The Board of Trade must have heard of these negotiations and it is surprising that it is not better informed on so important a subject.

WHAT'S IN A NAME

IN the land of the double jube-jube everyone is agog, for five expresses are to be named for the Festival Year. No prizes are offered for guessing where the following go: The Red Rose—or Harry Lime Street;

The Heart of Midlothian; The Merchant Venturer—lighting fittings by Troughton and Young?; The William Shakespeare—a horse, a horse, my kingdom for a horse; and the Royal Wessex—first stop Casterbridge.

If these names will do anything towards providing a faster, cleaner and generally more efficient service I am in favour of them. If you must have them at all, far better names are to be found from coaching days, for example, the Flying Machine, the Quicksilver, the Exeter Fly, the Comet, the Royal Eagle, the True Blue, the Life Preserver, The Eclipse, the Tally Ho, and the Vivid. All these names seem to me to be better than those chosen. The romance of the railways is leaving us fast, with standardised locomotives and coaches and standardised colours, uniforms and probably buns. What could be more splendid or more dignified than the caps worn by the higher officials on the Great Western or B.R. (W)? Is anything being done to retain them? What of the red ties and sleeved waistcoats of the porters on the London Chatham and Dover, alias Southern, alias B.R. (S)? Change is all the rage but so far no one has dared to deprive the stationmasters of London termini of their top hats, but doubtless it will come. Oh! B.R.(RRR)!

MORE ABOUT RAILWAYS

MORE passenger trucks are to be built next year. Lots of them. The lavatories of the first class ones will be lined with primrose plastic sheeting and the basins will be fitted with hot and cold running water. There is nothing particularly new in this, but an interesting innovation will be an ample water supply to go with the taps. I wonder whether a satisfactory system of lighting has been devised. It is remarkable how many compartments on trains out of Paddington have little or no light until the wheels are turning quite fast.

"The woodwork," says the press notice, "will be of decorative timber," now that's absolutely first class, and third, too, as it happens. I hope that there will also be pictures of places and an undistorted map.

Some of the trucks will have centre gangways and some will have compartments. New restaurant cars and larger kitchen cars are also to be built. Joints will be cooked in anthracite fired ovens but electricity will be used for grilling. On the Great Western I expect that the speed of the train will have some bearing on the colour of the inside of the steak.

WINDOW BOXES FOR THE FESTIVAL

THE National Gardens Guild, secretary Miss Jeanne Flower, will soon publish its programme for Festival Year. It will include advice on window boxes and other outdoor floral displays. Flowers will certainly be all the rage next year; I hope that there will be enough seeds to go round.

A.A. MEETING

DR. Rene Sand and Mr. Richard Llewelyn Davies were the speakers on "a Background to Hospital Planning" at a general meeting of the A.A. last week. Dr. Sand, who is professor of Social Medicine at the University of Brussels began his paper with a graceful tribute to the people of this country for their fortitude during the war. He spoke in beautiful English and

with great charm. Both Dr. Sand and Mr. Llewelyn Davies stressed the importance now attached to obtaining a friendly atmosphere in hospitals and while Dr. Sand spoke of ideal planning and equipment Mr. Llewelyn Davies, who was lifting the corner of the veil on his important research for the Nuffield Provincial Trust and Bristol University, spoke of economic difficulties and the task of choosing between such things as individual toilet arrangements for patients and air conditioning in the theatres, where money was insufficient for both. Several

doctors and one or two architects spoke. All were experts. Indeed, it was so much of an experts' evening that when an American architect on the staff of the A.A. School was asked to give his opinion he wisely said that he had had nothing to do with hospitals as an architect but at the age of 17 he had been a patient in one and had at once fallen in love with his nurse and although he could remember nothing whatever about the planning of the hospital he gave a fair description of the nurse, which showed, he said, that he was in favour of humanity in hospitals.

ABNER

NEWS OF THE WEEK

Mr. Tomlinson, the Minister of Education, speaking at the opening ceremony of seven schools at Leicester on December 2, said that more houses required more schools. Fewer schools and technical colleges would give only a few more houses in relation to the size of the present housing programme. To get those few additional houses by this means, you would have to disrupt the whole programme of educational reform and advance to which all political parties had committed themselves in 1944.

Private Building Licences in war Damaged Areas

In reply to a question by Brigadier Clarke in the House on November 30. The Minister of Health said that he was prepared to consider on their merits, any applications from local authorities who wished to devote a larger part of the allocation of houses to the issue of licences for private building to meet urgent needs.

Mr. Hugh Dalton, Minister of Town and Country Planning, has confirmed a Compulsory Purchase Order of the City of London in respect of about 8 acres, bounded by Cheapside to the North; Bread Street to the East; Cannon Street to the South; and St. Paul's Churchyard.

We understand that the Architect's department of Wandsworth Borough Council, which was instituted only three years ago, is to be abolished. In a reversion to the 1947 system, architectural work will be included in the Borough Engineer's Department, and Mr. W. H. Beesley, A.R.I.B.A., F.R.I.C.S., the present Borough Architect, is to be offered the post of Housing Architect, under the Borough Engineer.

OBITUARY

The death has occurred of J. Everett Hartley, L.R.I.B.A., of Skipton, aged 51.

The death has occurred of Mr. Percy Good, C.B.E., Director of British Standards Institution, at his home in Westminster on Saturday, December 2. Mr. Good was a Past President of the Institution of Electrical Engineers and of the Illuminating Engineers' Society and Hon. Fellow of the Imperial Col-

lege of Science and Technology. He was appointed Deputy Director B.S.I. in 1929, and Director in 1942. He was 70.

COMING EVENTS

Housing Centre

● December 12, at 1.15 p.m. "The Economics of Housing." Speaker: Mrs. Layton.

R.I.B.A.

● December 12, at 6 p.m. "Soane: The Case-History of a Personal Style." Speaker: John Summerson.

L.M.B.A.

● December 12, at 1 p.m. Central Area No. 3. Luncheon, Connaught Rooms. Guests of Honour: R. O. Lloyd, President, National Federation; and R. R. Costain, President, L.M.B.A.
● December 13, at 1 p.m. At Derry & Toms' Restaurant, Kensington High Street, W.8. Lunch and 93rd Ordinary General Meeting of Central Area No. 1.

Reinforced Concrete Association

● December 13, at 6 p.m. At the Institution of Structural Engineers, 11 Upper Belgrave Street, S.W.1. "The Non-Destructive Testing of Concrete." Speaker: R. Jones.

Institution of Structural Engineers

● December 14, at 5.55 p.m. "An Investigation of the Strength of Welded Portal Frame Connections." and "An Investigation of the Strength of Certain Welded Portal Frames in Relation to the Plastic Method of Design." Speaker: A. W. Hendry.

T. & C.P.A.

● December 13, at 6.15 p.m. "Planning Slough's Future." Speaker: P. W. Macfarlane.

CORRECTION

We have been asked by The Cement Marketing Company Ltd. to point out that in their advertisement in our issue of November 24, which referred to the external treatment of the Chatfield Hotel, Bournemouth, they gave as the responsible architects and contractors the names of Messrs. Jackson & Greenen and Messrs. Hayward & Sons Ltd. respectively.

These architects and contractors were, in fact, only responsible for the renovation.

The architects and contractors responsible for the design and construction of the hotel were:

1st Contract: Architects—Messrs. Mackenzie & Phillips, Bournemouth. Contractors—Messrs. Claude Barnes Ltd., Bournemouth.

2nd Contract: Architects—Ronald A. Phillips, F.R.I.B.A., Bournemouth. Contractors—Messrs. Hawkins Bros., Bournemouth.

CORRESPONDENCE

Open Letter to Ian Forbes, F.R.I.B.A.

Dear Mr. Forbes,—I enjoyed, thoroughly, your article in *The Architect**, but when you got to the subject of Quantity Surveyors you robbed me of my tranquility.

As the fellow who does your quantities it is my duty to my brethren to say something about your unseemly paragraphs advocating "healthy competition between Surveyors."

In these graceless days the Quantity Surveyor's competitive energies are fully absorbed in grappling with the consequences of:

(a) The Architect's remark "Well, here are most of the drawings, old chap, and don't be too long winded because I told the client you had them a month ago."

(b) The taker-off's query "Have you any idea, sir, what the Architect wants here and if we ask for a detail shall we get it before the litho, date?"

(c) The Contractor's observation that "This may be your idea of the variation account but the job is more than four figures in the red and I've got to do something about it!"

From the above three alone there flows enough "competition" to give one the illusion that one is engaged in an all-in contest with Mr. Ezzard Charles or some other eminent purveyor of rough stuff.

Taking up your simile of the butcher in halcyon pre-war days, you treated him royally by comparison. You gave your butcher more than five minutes' notice of lunch and did not expect him to deliver your chop in a Grand Prix racing car at peak revolutions with a blindfolded driver.

When Architects hand out specification notes and details with the eighth scales and tell the Quantity Surveyor that they have impressed on the client that the earning of the Surveyor's pittance takes time, boredom may cause the Surveyor to appreciate a rival, but that, seemingly, will be, at the earliest, when we are considering extensions to one of the heavenly mansions to accommodate the building fraternity of this generation.

As for the Surveyor's immoral opportunity to inter his mistakes in a concrete shroud, it exists, possibly, but the joint undertaker is the Contractor, who has a long memory and a rock drill. Exhumations have occurred often enough for the proceeding to be declared unwise.

Yours, etc.,

JAMES E. BABBS,
F.R.I.C.S., A.I.S.T.R.U.C.E.

*See A. & B. N. of Nov. 24.



Looking down on block 1 from the top floor of block 5



Sketch layout of the whole scheme.



Section I of the scheme. Block 1 is completed, the remainder are under construction

PIMLICO HOUSING SCHEME, SECTION I for Westminster City Council

architects
POWELL & MOYA

director of housing
John Hughes, A.R.I.B.A., B.Arch.
consulting constructional engineers
Scott & Wilson
consulting engineers, district heating
Kennedy & Donkin
consulting heating engineers (flats)
R. Preston & Partners



View from South-east

tall blocks are sited at right angles to the river with living rooms facing west and with the majority of bedrooms facing east. The only exception to this orientation for tall blocks is at the western extreme of the site where two tall blocks are parallel with the others, but are arranged so that all habitable rooms face east. This arrangement has been chosen as these blocks are very close to the railway bridge, which lies to the west.

The angles of light between blocks of flats taken at ground floor window level is usually 20 degrees. The 9-storey blocks of flats are approximately 175 ft. apart.

The blocks are served by small 14 ft. wide service roads connecting with the main east-west service road. There are no direct road connections between the site and Grosvenor Road, the important riverside road on the south border of the site. Special attention, however, has been paid to the pedestrian access to the blocks on the site rather than giving undue prominence to the vehicular access. The open spaces between the blocks of flats are laid out as lawns, small enclosed public gardens, and private gardens belonging to Nursery Schools, lower level maisonette dwellings, and 3-storey houses. There are also children's playgrounds provided. The tall blocks are staggered in layout to avoid the cutting up of

rendered derelict or were very badly damaged by enemy action.

In accordance with the requirements of the County of London Plan, an area has to be developed for housing at a density of 200 persons an acre. Apart from flats, the scheme will include a community centre, a day nursery, three nursery schools, four public houses, about 30 shops, laundry, mortuary, restaurant, public lavatories, and a service station with underground garage for 200 cars.

As the site was so extensive and important, the Westminster City Council held an Architectural Competition in 1945-6 and the scheme illustrated has been carried out by the winners of that competition.

The first section consisting of 495 flats is being developed in two contracts. The first consists of 370 flats in 9-storey blocks. One of these blocks is now complete and the remaining three are nearing completion. A second contract for the remaining 125 flats (in 4-storey blocks and a 7-storey block containing also 13 shops) on the first section is also in progress. The whole scheme will contain approximately 1,600 flats.

LAYOUT

Due to the high density required, the majority of the blocks of flats have been built to the maximum height allowable. These



SCALE: 20 FT. = 1 INCH

these open spaces into long tunnel-like strips running from the north to the south borders of the site. This staggering also opens up the layout and allows diagonal views of the river, even from the flats near the north edge of the site.

On Section 1, there will be open green spaces between the tall blocks of flats and it is proposed, before next summer, to transplant some grown trees in these open spaces. At the north end of this section where the 4-storey maisonettes blocks are sited and where the treatment is more intimate, there will be private gardens and smaller scale planting. The open way through under the north end of Block 1 will form part of a pedestrian way which will run from east to west across the site when all the sections have been developed.

The street lighting is by means of fluorescent fittings. The standards have been designed by the Architects in conjunction with the City Engineer of Westminster, though the main shafts used are standard tapered steel components painted aluminium.

HEAT ACCUMULATOR

The District Heating scheme is described in an article on pages 628 and 629 of this issue.

The heat accumulator has been sited as near as possible to the "centre of gravity" of the scheme for economy in layout of mains, and in such a way as to enhance the appearance of the estate without, at the same time, spoiling the light and views from any of the flats.

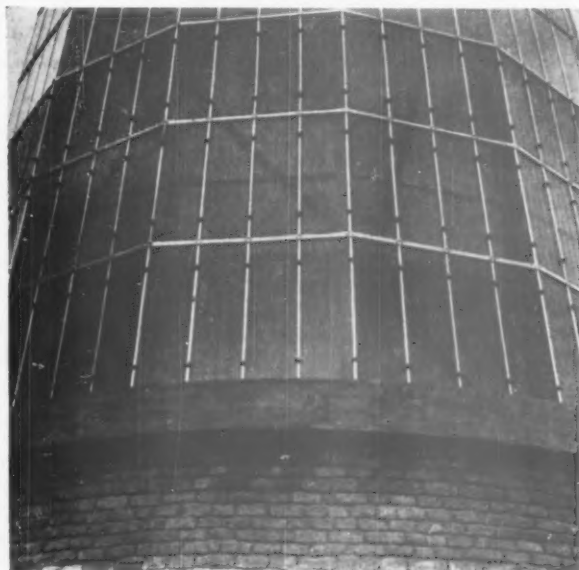
The outer casing to this accumulator consists of prefabricated panels of rolled steel sections welded on the site. The glazing to this casing is of $\frac{1}{4}$ in. rough cast glass in aluminium patent glazing frames. The glass is removable from the inside. There is a rotating jib at the top from which a cradle can be suspended for cleaning purposes. The steel frame of the casing, which can be seen through the glass, is painted with aluminium paint and the welded steel vessel containing the hot water, which is insulated with cork on its outside face, is plastered and painted very light grey. The glass casing has not been carried down to ground level for fear of wilful damage that might be caused. The base has been constructed, therefore, of reinforced concrete, faced with granite setts, which are used as permanent shuttering. These setts were already used as paving on some of the bombed areas on the site and have been thus reused.

BLOCK NO. 1 "CHAUCER HOUSE"

This block contains 104 flats served by 6 staircases and 6 lifts. 92 are four room flats, 12 (on the top floor) are smaller. It is 9-storeys high and has a basement in addition. The basement is accessible by lifts, staircases and a ramp and contains pram and bicycle stores for each flat, and a small laundry. It also acts as a horizontal duct for the district heating services. House-hold refuse in this block is deposited in containers at ground floor level, which are housed in two special outbuildings on the opposite side of the service road. However, it



The heat accumulator. The glazing is $\frac{1}{4}$ inch rough cast glass in aluminium patent glazing frames. The base is faced with granite setts taken off the site.





One of the vertical lines of balconies from Antrobus Street. The front edges of the concrete walls are painted white, while flank and back walls are painted a single vivid colour. For the six lines of balconies either red, blue or green is used.

has been decided by the Westminster City Council that for all later blocks refuse chutes will be installed—unfortunately this block was too far advanced when this decision was made to allow for the incorporation of such chutes.

Block 2 is similar to block 1, though it contains 4 staircases instead of 6. Blocks 5 and 6 are identical and similar in general arrangement to the two other blocks but contain three room flats instead of four room flats and each has a special south end where there are two room and five room flats. The construction of these blocks is generally similar to the construction of block 1.

CONSTRUCTION

Monolithic reinforced concrete with external walls and transverse spine walls 7 in. thick. Floors are solid reinforced concrete slabs 6 in. thick. The external walls are lined internally with 1½ in. wood wool slabs, used as permanent shuttering and to provide

thermal insulation. On the main faces of the building, walls are faced externally with bricks used purely as a panel facing and supported by horizontal reinforced concrete nibs at each window head level. Bricks are tied back to the structural walls by means of galvanised iron cramps, which fix into dovetail galvanised slots, cast in with the concrete walls. The flank walls and back walls of the balconies, the top floors and the tank rooms are of exposed concrete and smooth shuttering has been used. These surfaces are painted with a chlorinated-rubber based enamel paint. The type of structure evolved has given freedom of planning and has avoided the unsightly projection of columns into rooms. The facing bricks are yellow flint limes, chosen for their light, even colour and for their smooth surface. The metal windows set in the brick faced walls are almost flush with the surface. The front doors, casement doors and the windows on the balconies are of timber.

INTERNAL WORK

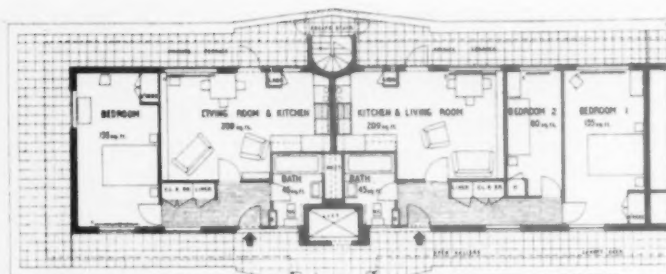
The floors are insulated against sound: in the case of living rooms and bedrooms, of t. & g. boarding on battens on cork pads, which are stuck down on to the concrete slab. In the case of floors in kitchens, bathrooms, w.c.s and halls, there is a screed floating on resilient glass silk quilt, finished with dark brown plastic tiles. The 2½ in. breeze partitions are built up on felt strips. In the case of Block 1 party walls are 7 in. reinforced concrete with no additional soundproofing applied, as in no case is the living room of one flat placed adjacent to the living room or bedroom of another. The 7 in. concrete wall is slightly above the recommended standard of sound insulation for bedroom against bedroom. In the case of Blocks 5 and 6 where living room is adjacent to livingroom, there are free standing 2½ in. breeze partitions on either side of the party wall giving, therefore, three leaves of wall and two air spaces.

Walls internally are plastered with a ½ in. thick hemi-hydrate plaster suitable for application on to breeze, concrete or wood-wool surfaces. Ceilings are plastered with a special gypsum plaster, which bonds in with the concrete soffits without the necessity of providing a mechanical key. Cills are of dark brown quarry tiles and white glazed tiles are used for the splash-backs in the kitchens.

Kitchen equipment is based on E.J.M.A. standards. Ward-ropes are built-up of partition blocks with fronts also based on E.J.M.A. standards. Distemper is used on plaster work excepting the dado of the bathroom and one of the kitchen walls, where a gloss paint is used.

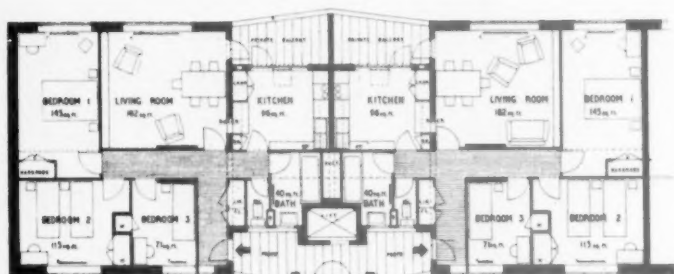
SERVICES

All services are taken in internal ducts. The main ducts serve a pair of flats on each floor and are situated, therefore, at the party wall. The ducts have large access doors. The rainwater pipes (with the exception of those on private balconies) are internal but are adjacent to the external wall of the access porches, which



TYPE 2c
8th FLOOR ONLY
473 sq ft

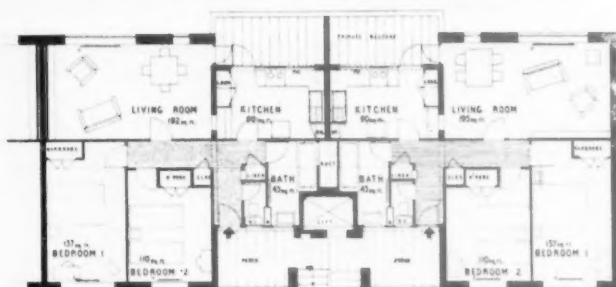
TYPE 3b
8th FLOOR ONLY
563 sq ft



TYPE 4a'
GROUND TO 7th FLOORS
783 sq ft

TYPE 4a
GROUND TO 7th FLOORS
783 sq ft

Flats: Blocks 1 & 2



TYPE 3a
GROUND TO SEVENTH FLOOR
671 sq ft

TYPE 3a'
GROUND TO SEVENTH FLOOR
674 sq ft

Flats: Blocks 5 & 6

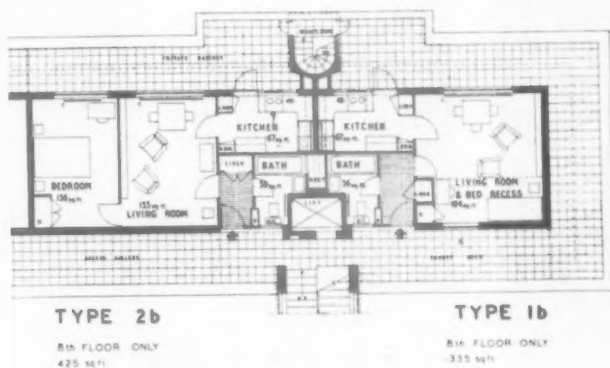
PIMLICO

FLATS,

WESTMINSTER



Flats: Blocks 5 & 6 (end)



Flats: Blocks 5 & 6

are drained into these rainwater pipes by means of special flat cast iron gulleys, which can be placed within the thickness of the slab and do not project through the underside of it. The central heating mains rise in one of the bedroom cupboards and horizontal branches to the radiators are taken in the floor screed. The radiators (which are in all living rooms and bedrooms) are bracketed from the walls.

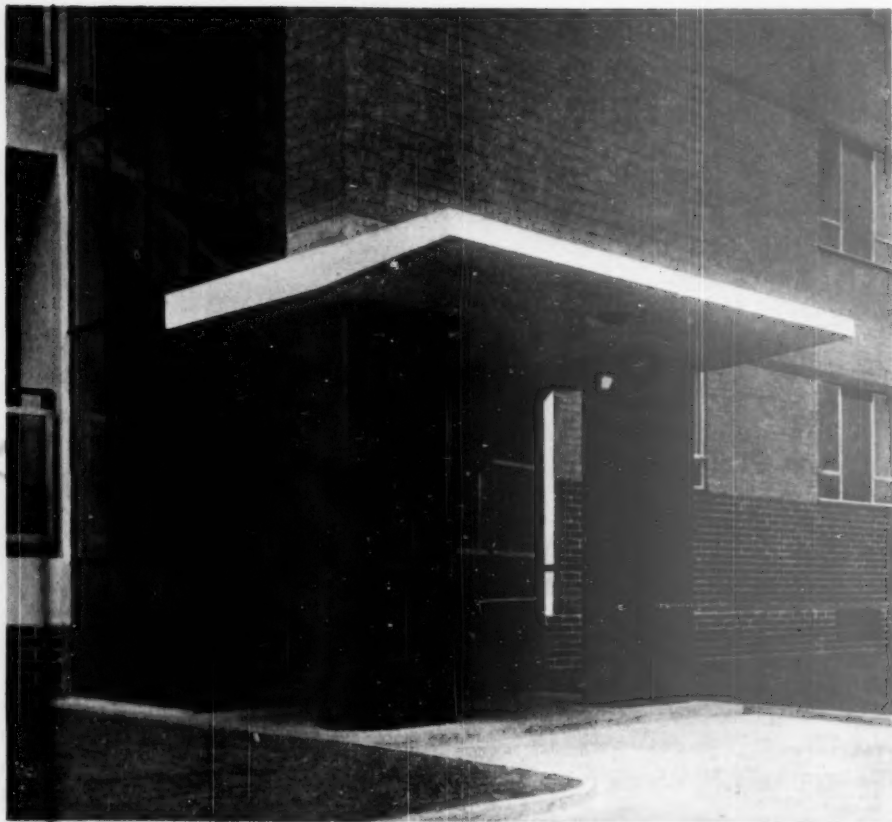
The electrical service is on three circuits, (1) a cooker circuit, (2) a 5-amp. circuit for the light fittings, and (3) a 13-amp. fused plug ring main circuit for all floor points, whether light or power. There are 4 such plugs in each living room, 2 in kitchens, and 2 in bedrooms. All horizontal conduits are cast in with the reinforced concrete floor slabs. All kitchens have free choice of gas or electricity for cookers, refrigerators and wash boilers. The flats are also serviced for relay wireless and television.

EXTERNAL COLOUR SCHEME

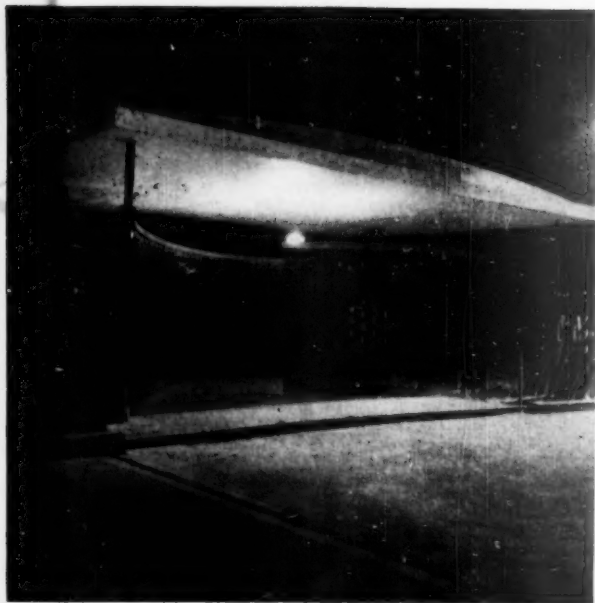
The main walls are faced with yellow flint lime bricks with a plinth of Staffordshire blue engineering bricks up to ground floor sill level. Window frames in these walls—off white; metal cills—black; horizontal nibs supporting brickwork—unpainted; reinforced concrete “way-through” supporting the north end of the block—unpainted concrete; staircase glazed walls, metal frames—black; metal panels at base of staircases—violet. Top floor, tank rooms, balcony reveals and staircase columns—light putty. Vertical r.c. nibs, balcony upstands and balcony soffits—white. Balcony fronts—Georgian wired rough-cast glass in aluminium frames, supported on steel tubes. Tubes and handrails painted black. Entrance columns—dark grey; front doors—black.

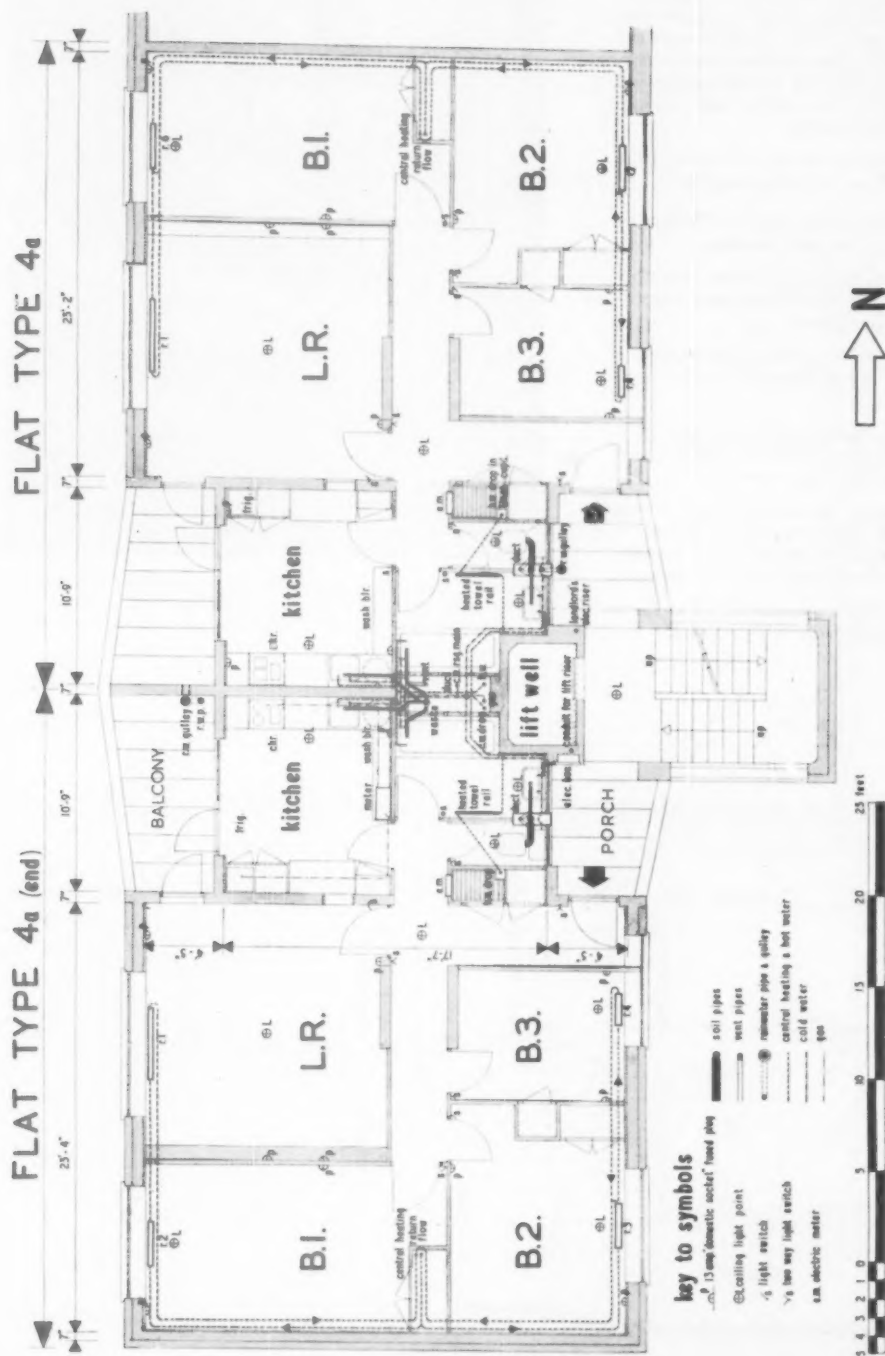
Back walls of balconies, lift fronts, panels below windows, internal wall at staircase below landing are painted sky blue on staircases Nos. 1 and 4, poppy red on Nos. 2 and 5, and grass green on Nos. 3 and 6.

ARCHITECTS: POWELL & MOYA



Two views of a staircase entrance. Bottom left is one of the refuse shelters.





In flat type 4a end, the division between B.1 and L.R. is a thin partition and living room fitting not a solid wall

P I M L I C O H O U S I N G , W E S T M I N S T E R

The notes which follow read with the plans below :

1. Reinforced concrete walls and solid R.C. floors give closed box-type of structure. 7" thickness of wall gives good protection, economic use of reinforcement and serves to minimise sound transmission between flats. (Walls will not act as thin vibrating diaphragms.) Continuity of material to external walls minimises cracking and pattern staining.

2. Finished floors are isolated from structural slab by a resilient quilt over the whole area of flat.

3. At party wall (living rooms) two independent partitions are used for sound insulation.

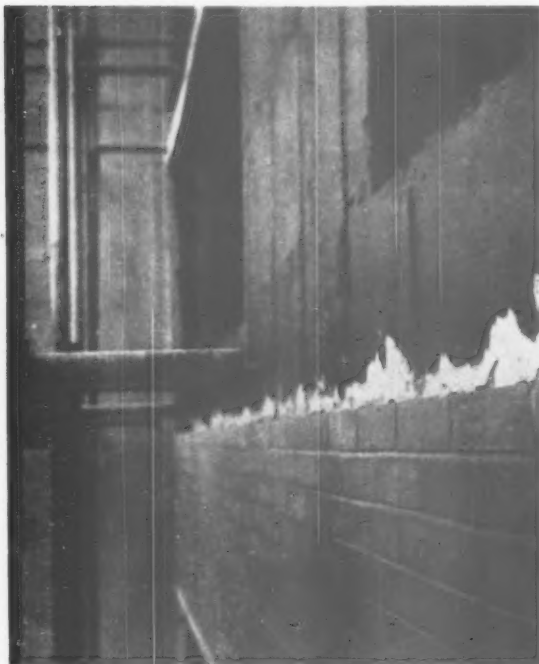
4. At party wall (bedrooms or kitchens, etc) 7" reinforced concrete wall, plastered both sides, is slightly above standard requirements.

5. 1½" wood wool slabs act simultaneously as permanent shuttering to internal faces of walls and as thermal insulation.

6. Vertical pipes pass through sleeves, not slots, in the slabs to give additional freedom in slab design and to simplify fire precautionary measures.

7. Central heating flow and return pipes perforate the centre of the wide spine beams at its point of contraflexure. Central heating services are compactly arranged in the living-sleeping section of the structure.

8. Hot water services and plumbing are compactly arranged in the utility section of the structure.



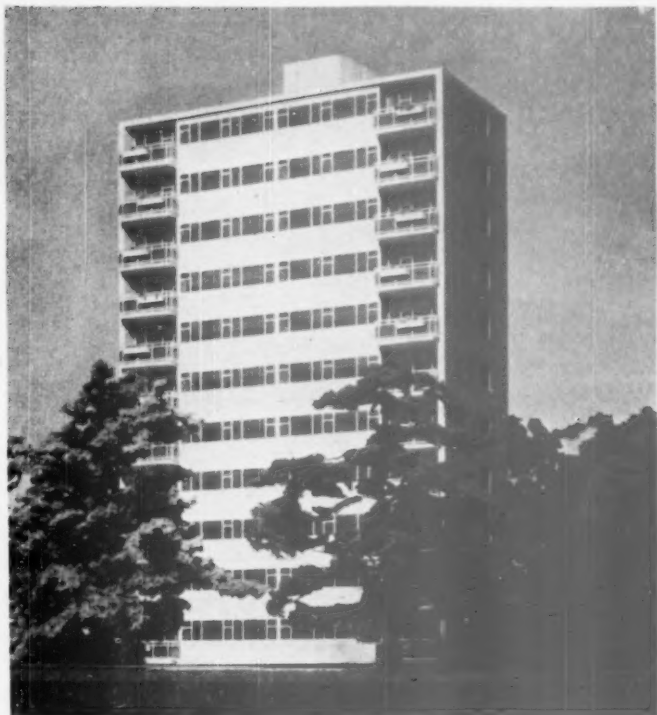
This view shows the panel facing of yellow flint lime bricks being built up against the R.C. external wall. Bricks are supported by horizontal R.C. ribs at each window head level



LCC

NEW TYPE HOUSING

SCHEME
FOR SITES,
PRINCES WAY
AND WIMBLEDON
PARK SIDE,
WANDSWORTH



The scheme has been prepared by the Housing Division of the Architect's Department of the L.C.C.: ROBERT H. MATTHEW, Architect to the Council; Dr. J. L. MARTIN, Deputy Architect; WHITFIELD LEWIS, Principal Housing Architect; MICHAEL POWELL, Assistant Housing Architect. Architects: C. A. Lucas, H. G. Gillett, A. W. Barr, E. Moholi, A. P. Roach, J. Partridge. ARTHUR LING, Senior Planning Officer. Planning Division: J. M. Hirsh, Miss J. L. Gardner.

THIS scheme for the development of two L.C.C. housing sites which are quite exceptional and call for special architectural and planning consideration has been approved recently by the Council.

The sites comprise the grounds and, in some cases, the properties of large Victorian and Edwardian houses which will be retained. These houses are surrounded by fine trees, appropriate landscaping, and special garden features. One of the properties, "Fairlawn," in Wimbledon Park Side, has well-wooded spacious grounds and a magnificent garden with a large ornamental lake. The Council have acquired the eastern portion of the grounds, the design and execution of which is attributed to Paxton and this will be preserved in its entirety. On the site as a whole there are about 500 mature trees of which nearly 400 are in sound condition and will be retained.

A properly co-ordinated scheme of mixed development includes a proportion of houses. The planning problem, therefore, is to build at a higher density, to provide a proportion of houses (both of which, of course, increase the area of site coverage) and at the same time preserve the open character of the development with its

beautiful natural features. The obvious solution is high blocks, but as this involves high costs a compensatory factor is necessary if the scheme is to be kept within economic limits. Houses do not materially assist, as although they are cheaper to build than flats the subsidy is too low to give a satisfactory financial result. Two new types have, therefore, been evolved; high blocks with a minimum of site coverage and superimposed maisonettes giving better accommodation than that provided in flats but at a lower cost and with the further advantage that they rank for the "flat" rate of subsidy.

"Point" Block Flats

There are three sites each of some 1-1½ acres which are particularly suitable for high blocks with a minimum of site coverage. These sites are isolated, and possess very fine landscape features. A further site has been chosen on the Victoria Drive frontage to complete an even disposition of high blocks over the whole area. On these four sites, all of which are on high ground, 11-storey "point" blocks will be built.

The design of the "point" block is based on a T-shaped plan with three flats off a common stair on each

floor. This arrangement, which enables the public access space to be naturally lit and ventilated, sets a very high standard of open planning for a residential building of this type in comparison with similar schemes on the continent and in the U.S.A. Such planning has only been made possible by two things—first, the extreme simplicity and economy of the structure of the "point" block itself and secondly, the fact that in a large development of this kind the higher cost can be offset against the lower cost of other types.

The height of the "point" block is slightly less than 100 ft. Each block of 11-storeys contains 3 flats per typical floor. (See plans pp. 620 and 621.) The T-shaped plan puts each flat in a separate wing with windows on three sides, giving a wide range of aspect and maximum daylighting and sun penetration. At the junction of the wings is a central "core" comprising two lifts, main and escape staircases opening on to a balcony landing. The two lifts stop at alternate floors, an arrangement most economical in capital and maintenance cost, while ensuring that in cases of breakdown on one lift, tenants will not have to walk more than one floor up or down.

The structure of the "point" block (which was designed in collaboration with Messrs. Bylander & Waddell, Consulting Engineers) is a reinforced concrete frame. It consists of cross beams supported on long piers (two to each bay), the ends of the beams being cantilevered beyond the piers on each side. Full advantage was taken of the resistance to wind pressure afforded by the leg of the T, by spacing the piers so that a rigid tie was obtainable across the junction between each wing. The advantage of a T or star-shaped block over a straight block in this respect was rated of considerable importance. The alternative of a star-shaped block was considered, but was abandoned mainly on account of the simplicity of structure afforded by the T-shaped plan.

The external walls of the "point" block as designed

are in traditional materials—flank walls in cavity construction with brick facing, and spandril walls on other elevations in reinforced concrete with wood wool internal lining. The floors and roof are in solid reinforced concrete.

Sound insulation primarily against impact noise is proposed by means of "floating" floors over a fibreglass blanket.

The estimated average "all-in" cost is £699 per room.

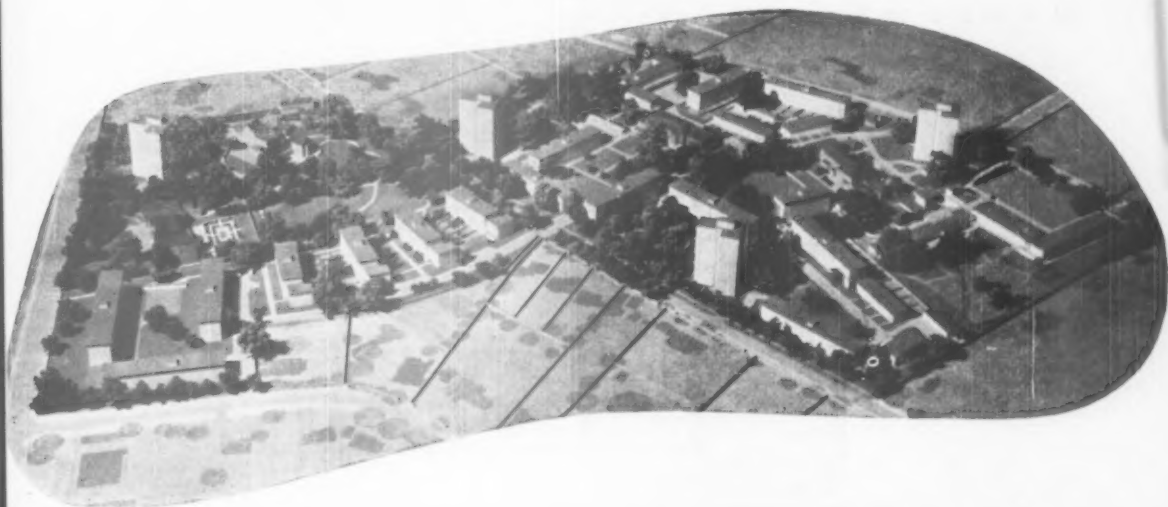
Maisonettes

The somewhat higher cost of these eleven-storey blocks has been offset by the lower cost of two- and three-storey buildings on other parts of the site, and in particular by the development of a new type—the four-storey maisonette. This type has been designed for schemes of mixed development where density considerations permit their use in place of multi-storey flats. The plan is basically a 3-bedroom maisonette with a 4-bedrooms variation for use at the ends of the blocks. Whilst embodying the advantages of this type economies have been effected in planning and structural costs mainly by the adoption of a system of construction based on the use of load-bearing party walls.

The accommodation provided in each maisonette is shown on the plans.

The maisonette blocks are in load-bearing brick construction, on the "cross wall" principle. Cross walls in 9 in. calculated brickwork carry the full load of the structure at about 18 ft. centres, and the external walls are in non-load-bearing construction for which purpose cavity construction or hollow blocks are used. This method enables a higher degree of insulation to be obtained as the external walls are divorced from their function of carrying floor loads. Sound insulation between maisonettes is provided by "floating" floors as in the "point" block.

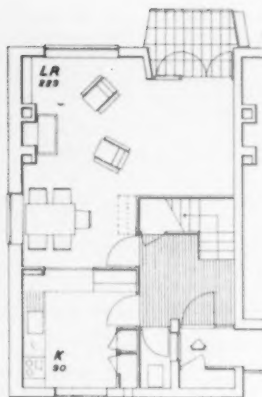
The estimated "all-in" cost is £425 per room.



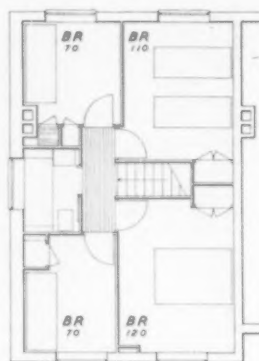
General view of the model of the housing scheme. A site plan with details of the various buildings is shown on page 622.

5-ROOM MAISONNETTES

Living Room	-	236 sq. ft.
Kitchen	-	90 sq. ft.
Bedroom 1	-	120 sq. ft.
Bedroom 2	-	110 sq. ft.
Bedroom 3	-	70 sq. ft.
Bedroom 4	-	70 sq. ft.
Overall Area	-	900 sq. ft.



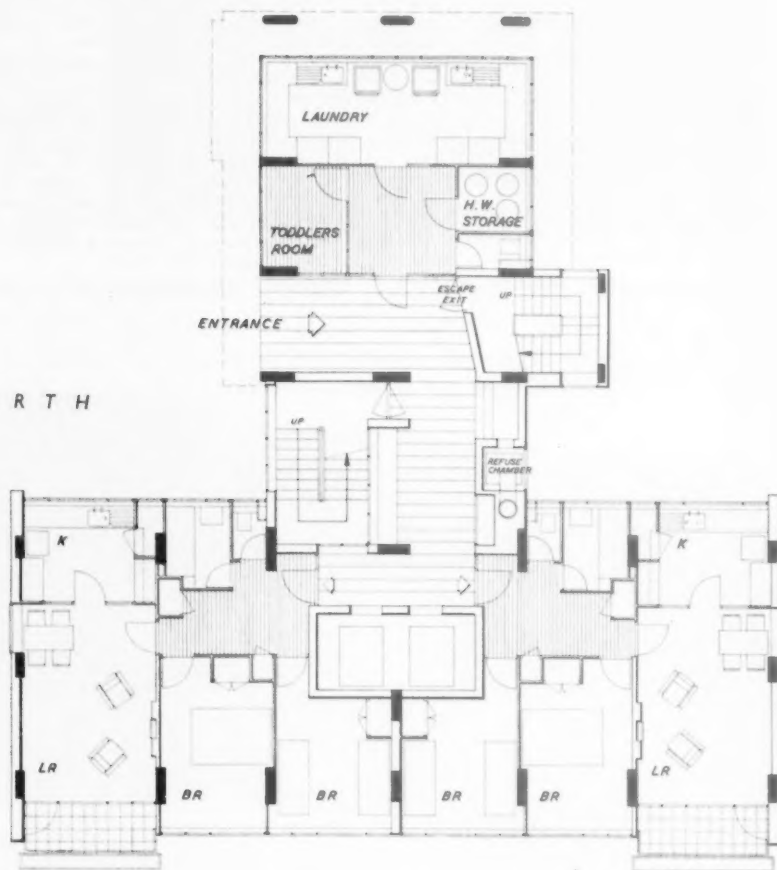
LOWER FLOOR PLAN



UPPER FLOOR PLAN

5 ROOM SUPERIMPOSED MAISONNETTES 900 SQ FT

L. C. C.
HOUSING
WANDSWORTH



3 ROOM FLAT 641 SQ FT

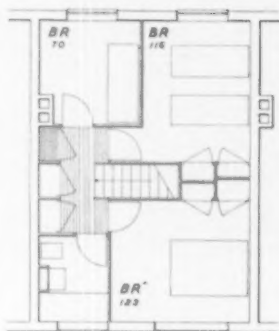
3 ROOM FLAT 641 SQ FT

11 STOREY POINT BLOCK GROUND FLOOR PLAN

10 0 10 20
SCALE OF FEET



LOWER FLOOR PLAN



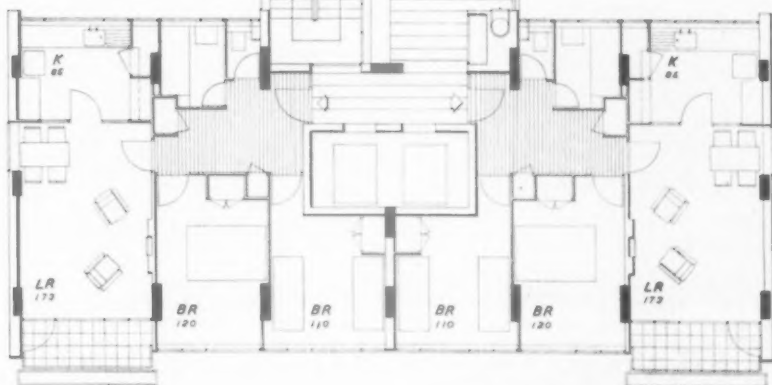
UPPER FLOOR PLAN

4 ROOM SUPERIMPOSED MAISONNETTES 773 SQ FT

4-ROOM MAISONNETTES

Living room	-	183 sq. ft.
Kitchen	-	90 sq. ft.
Bedroom 1	-	123 sq. ft.
Bedroom 2	-	115 sq. ft.
Bedroom 3	-	70 sq. ft.
Overall Area	-	773 sq. ft.

3 ROOM FLAT 638 SQ FT



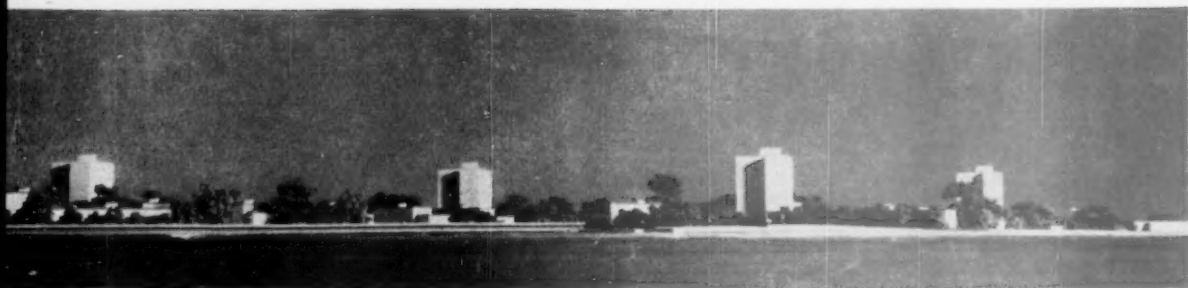
3 ROOM FLAT 641 SQ FT

3 ROOM FLAT 641 SQ FT

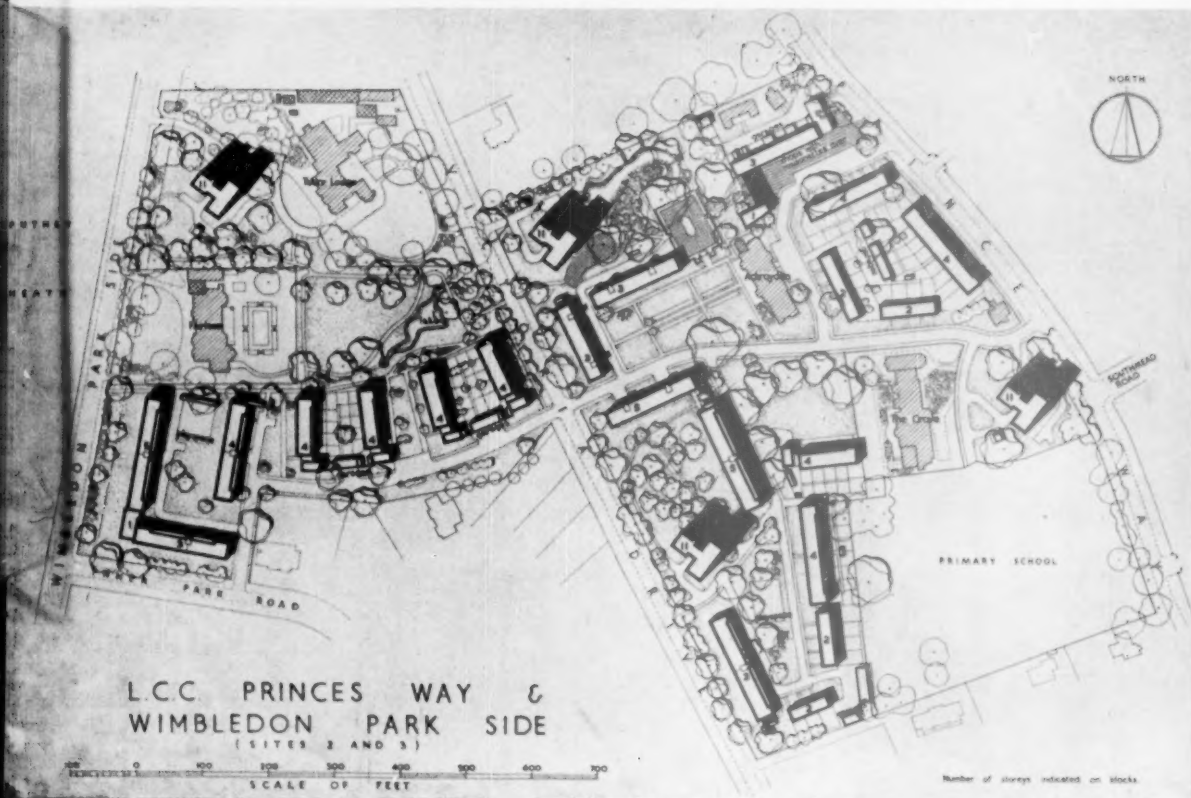
11 STOREY POINT BLOCK TYPICAL FLOOR PLAN

11-STOREY FLATS

Living Room	-	173 sq. ft.
Kitchen	-	85 sq. ft.
Bedroom 1	-	120 sq. ft.
Bedroom 2	-	110 sq. ft.
Overall Area	-	638-641 sq. ft.



View of the model showing even distribution of "point blocks" over the whole area. All sites for "point" blocks are on high ground.



Site Plan of the proposed development with storey heights shown on each block. The site comprises 23 acres. The scheme envisages: four of the new 11-storey "point" blocks; one 5-storey and two 3-storey blocks with staircase access; two 3-storey blocks, one 4-storey block and two 5-storey blocks with balcony access. Eight of the new super-imposed maisonette blocks, eight shops with maisonettes above and sixteen 4-roomed terrace houses. The total accommodation will be 314 flats, 106 maisonettes and 16 houses at a density of 26.8 dwellings per acre. There will be 6 laundries, 2 playgrounds, 32 garages, sheds and stores in addition.

L.C.C. HOUSING, PRINCES WAY AND WIMBLEDON PARK SIDE.



**New Premises for Bolingbroke & Sons Ltd. at
Chelmsford**

ARCHITECT: ROFF MARSH, F.R.I.B.A., A.M.T.P.I.

NEW PREMISES FOR MESSRS. BOLINGBROKE Chelmsford

MESSRS. Bolingbroke was one of the leading shops in Chelmsford and when it was burnt down the Local Authority and Chamber of Commerce gave vigorous support to its reconstruction.

The fire which started in the adjoining premises on the 24th June 1947 gutted both properties and although a licence was promised for the rebuilding, a Government White Paper issued before the plans could be passed by the Local Authority prevented this licence from being granted and it was not until August 1948 that permission to reconstruct the basement and ground floor was given. In May 1949 a further licence was issued for the upper floors out as the revised code of practice had been passed in 1949, the Ministry of Works insisted on the steelwork for the upper floors being redesigned to conform with the new code before they granted a steelwork authorisation.

The London Road end of the old premises have been temporarily repaired and only the High Street block has yet been constructed. The proposed rebuilding of the remainder of the property is shown hatched on plan.

Site

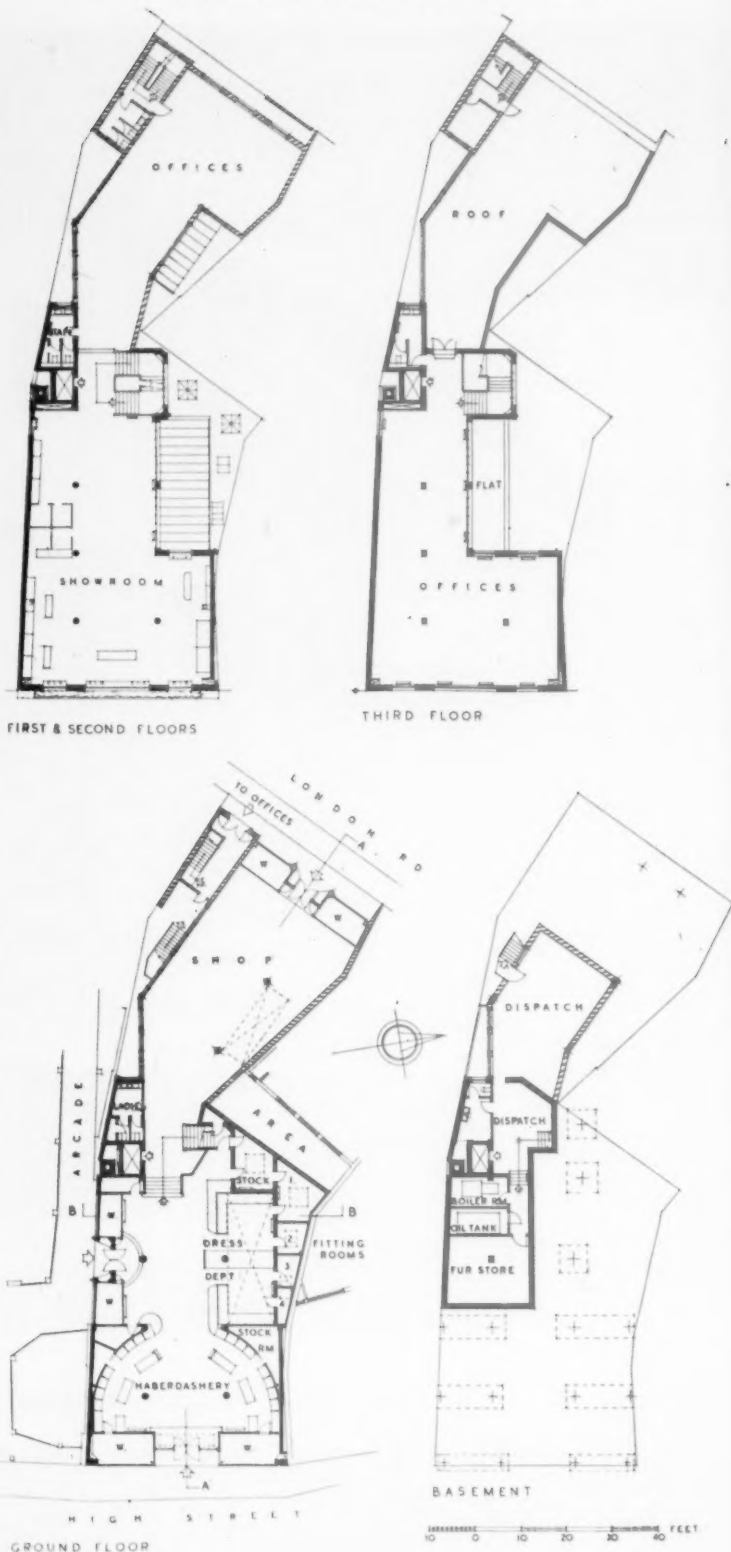
The site is very irregular in shape with frontages to High Street and London Road. The frontage to the High Street is about 44 ft. but at one point the site is only 20 ft. wide. There is also a difference of level of three feet between the two streets.

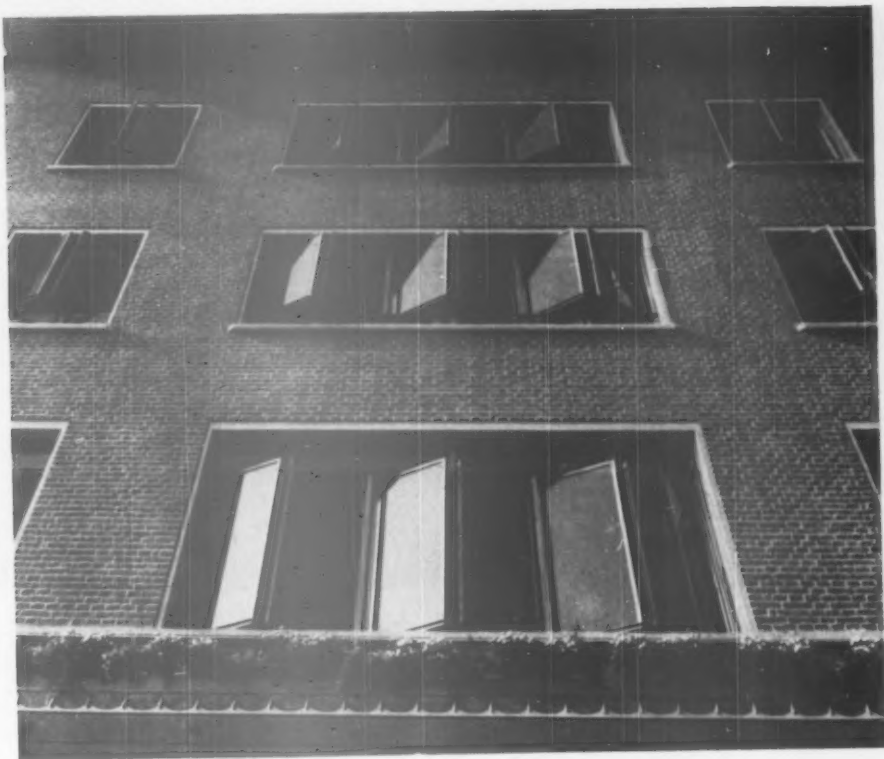
Layout

Adequate natural lighting to all floors has been achieved by the formation of a large area on the north side which also maintains the required angle of light to the ancient lights in the adjoining property. The flank wall of the area is completely glazed and provides north light to the showrooms and workrooms on the upper floors and a large lean-to lantern light gives natural light to the dress department on the ground floor. The position of the staircase disguises the narrowness of the site at the centre and the difference of level between the two fronts has been overcome at the same point.

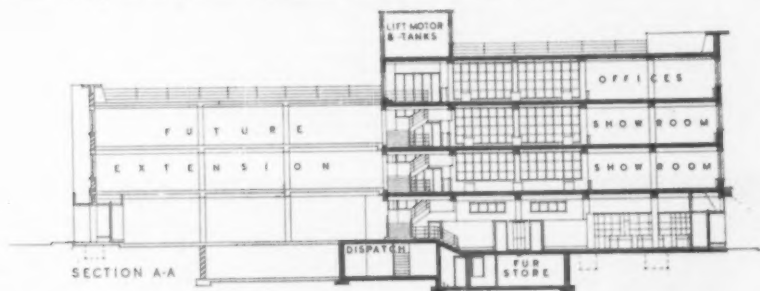
Construction

The building is of steel frame construction with semi-precast hollow tile floors and roof, the latter is finished in asphalt. The external panel walls are brick, the front being built in multi-colour 2 in. facings. The windows on the front elevation are pivoting metal casements set in a surround of Travertine marble. The glass panels on the north side and on the staircase are wood with steel





The windows are pivot hung metal casements set in a surround of Travertine



horizontal glazing bars and pivot hung vents and glazed in rough cast plate.

Design

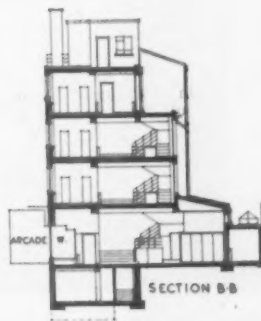
The shop is designed to give a feeling of spaciousness with large glass panels on either side of the glazed entrance doors giving a view of the interior of the shop from outside. The curved walls of the Haberdashery and Stocking Department inside also emphasize the feeling of space. The irregular shape of the site has been overcome by the positioning of the fitting and store rooms. Ducts have been provided for all services with access panels at each floor level. Sanitary accommodation has been planned on each floor adjacent to the staircase.

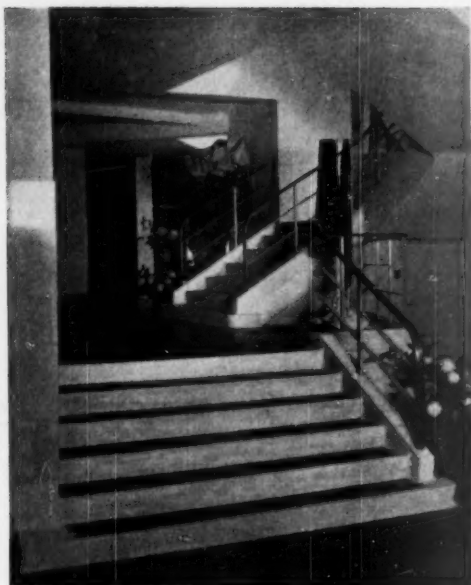
Heating

Heating is by an oil fired boiler



PROPOSED BACK ELEVATION





Staircase, ground floor level



Arcade entrance

situated in the basement with a 1,000 gallon oil storage tank adjoining. The oil supply pipe is taken to the London Road and filling is controlled by a warning bell.

Finishes

The basement is waterproofed with Sika waterproof cement applied internally to walls and floors. The ground and first floors are finished in 12 in. x 12 in. cork tiles and the second and third floors are Accotile. The walls generally are distempred and the columns are painted. The staircase is finished in Terrazzo with cork insets

in the treads and landings. The hand-railing is metal with a bronze capping.

Shop Fitting

The window frames and entrance doors are in bronze and the surround is in Fiorita marble. The panelling and shopfitting on the ground floor are in sycamore, and the counters are in sycamore mounted with shallow bronze framed displays. Above the window backs is a "Perspex" screen lit from behind with fluorescent tubes. The light also shines down into the show windows which are also illuminated with tungsten lamps in reflectors set in the soffit of the window.

BOLINGBROKE & SONS NEW PREMISES ARCHITECT ROFF MARSH

Structural Engineers—R. Travers Morgan & Partners.

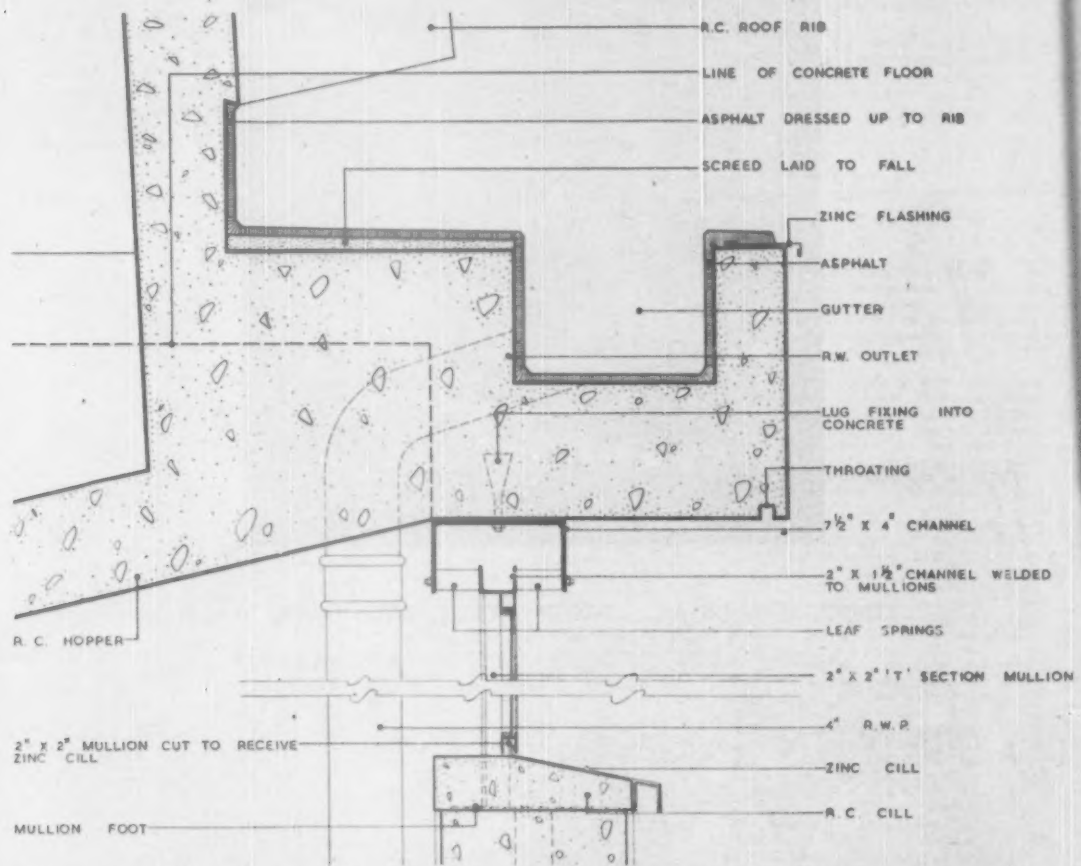
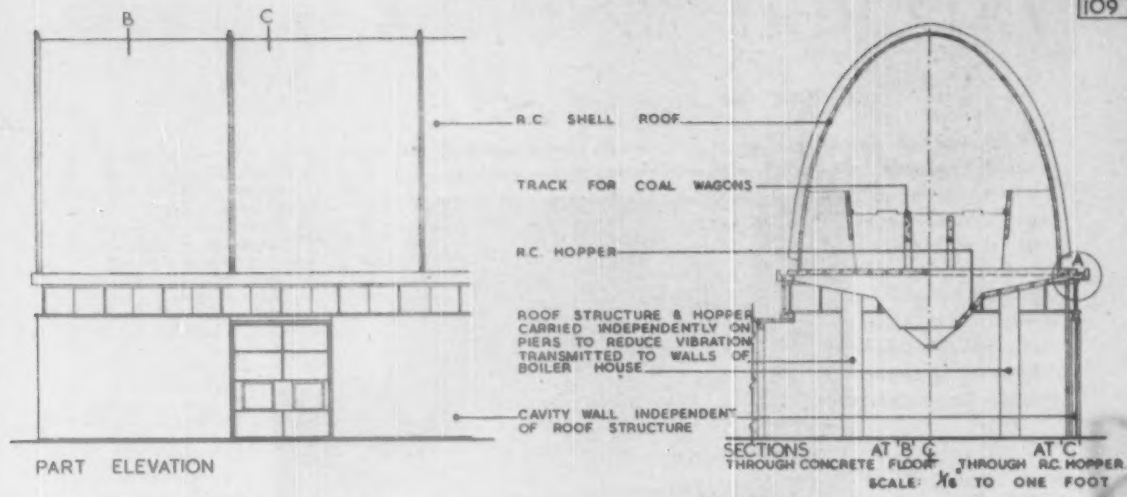
Quantity Surveyors—Messrs. Fleetwood Buss and Anns.

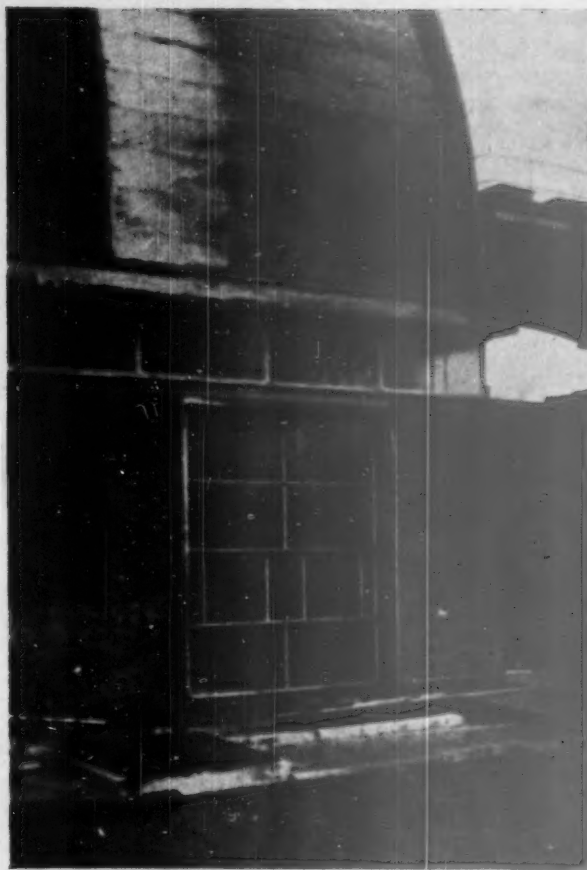
General Contractor—H. R. Barber & Son.

Asphalte—Ragusa Asphalte Paving Co. Ltd.
Bricks — Marston Valley Brick Co. Ltd.
(Common); Proctor & Lavender Ltd. (Facings).
Balustrading — C. A. & A. W. Haward.
Cork Tile Flooring, "Jointite" to Showroom Floor and Staircases—Mundet Cork Products Ltd.
Electric Lighting and Power Installation—Christy Bros. (Chelmsford) Ltd.
Floors and Cornices—Flooring Contracts (London) Ltd.
Heating—R. W. Steele & Co. Ltd.
Ironmongery—Yannedis Ltd.
Lettering—Brent Metal Works Ltd.
Marble Work—Anselm Odling & Sons Ltd.
Plastering—A. Willett & Sons Ltd.
Patent Glazing—The British Challenge Glazing Co.
Sanitary Fittings—The City Iron Co.
Shopfitting—D. Burkle & Son Ltd.
Steelwork—Redpath Brown & Co. Ltd.; Fawcett, Preston & Co.
Terrazzo—Zanelli Ltd.
Tiling—Carter & Co. (London) Ltd.
Waterproofing—Quickset Water Sealers Ltd.
Windows—Colchester Steel Constructional Co. Ltd. (Metal); Rippers Ltd. (Wood).
Roller Shutters — Dennison Kett & Co. Ltd.
Structural Engineers—R. Travers Morgan & Partners.



General view from main entrance





STRUCTURAL DETAIL. BOILER HOUSE, BRYNMAWR, WALES
ARCHITECTS : CO-OPERATIVE PARTNERSHIP

NEWS of the BUILDING INDUSTRY

THE COST OF FINE ART

IT is reported from a reliable Scottish source that the Ministry of Works' decision to use English stone on the new Government building now in progress of construction at George Street, Glasgow, has aroused considerable opposition among Scottish stone trade interests and quarry masters. Efforts were made to induce the Ministry to adopt a red stone, in the first place, the adjacent buildings being in that material. Unsuccessful efforts were then made to induce use of cream stone from Kerrlaw, near Hamilton, of a type and quality comparable to that available in England and available at lower cost.

Proposals to use any type of Scottish stone, in view of the fact that it was a Scottish building in a Scottish town, amid a ring of stone quarries, were turned down. The decision of the Fine Art Commission dictating cream stone, and the decision of the Ministry of Works to bring that stone, at higher cost, from English quarries, would both seem to indicate that Scottish stone is regarded as unsuitable for Scottish work despite the fact that

The Scots can always be relied on for loyalty to their own country. The accompanying report about the supply of stone for a building in Glasgow shows clearly that patriotism is not dead. But it also raises a question which, at a time when the paramount need is to reduce building costs, seems worth the consideration of those who are responsible for dictating—or, let us say, selecting—the materials to be used for building. The housing architect is restricted by cost in the choice of materials. Surely what is sauce for the geese should also be sauce for the ganders. If Scottish stone of equal quality and durability is available at lower cost than English stone it should in the interests of economy be used—particularly on Government buildings if only as an example of the Government desiring to co-operate in getting costs down.

such stone as was offered has been used regularly for many years. The Minister of Works' reply that cream stone is not available in Scotland has been refuted by quarries and masons interested in this subject.

The Scottish stone industry is facing this problem repeatedly through side-stepping of Scots stone. Government work originating in London shows a

bias towards English stone, at higher cost, despite official representations made by the trade organisations from Scotland.

Failure to use Scottish stone may mean that the quarry master or stone mason will find it more difficult to retain his labour and the industry will become less able to handle large scale work.

WALLASEY HOUSING COMMITTEE has decided to submit a scheme to the Minister of Health for his approval by which the Corporation will build houses for purchase by prospective tenants on the instalment system.

Under the scheme the tenant will pay a deposit of £25 and the balance in the weekly rent. Details have yet to be worked out but it has been suggested the houses should cost about £1,500 and that the repayment should be at the rate of a weekly rent of approximately 39s. including rates, or £1,700 repayable at a rental of 43s. 6d. a week. The repayment would be spread over thirty years.

The suggestion is that the houses should be built out of the licences allocated to private builders.

It is proposed that private builders should have 20 per cent. of the total house allocations to the town next year and that out of the 20 per cent. half should be devoted to the tenant-ownership scheme.

FULL DETAILS OF THE OFFICIAL APPRENTICESHIP SCHEME as it applies to London are included in the L.M.B.A. Handbook for 1950, published at 47 Bedford Square by the London Master Builders' Association. Copies have already been sent to members and to Government Departments and Local Authorities. A limited number is on sale at 15s.

Also for the first time all the Practice Notes issued by the Joint Contracts Tribunal up to date on the R.I.B.A. Standard Form are reprinted. The War Damage Repair Quiz, prepared in consultation with, and issued with the approval of the War Damage Commission for the assistance and guidance of builders engaged in war damage repairs, is reproduced.

★ INTEREST ★

THE 10TH INTERNATIONAL HEATING AND VENTILATING EXPOSITION, also known as the Air Conditioning Exposition, is scheduled to be held in the Commercial Museum, Philadelphia, Pa., from January 22-26, 1951. Under the auspices of the American Society of Heating and Ventilating Engineers.

No non-American manufacturers are yet included in more than 300 exhibitors.

The attendance recorded at the 9th Exposition, held in Chicago from January 24-28, 1949, was approximately 25,000, including visitors from seventeen foreign countries. Analyses of visitor registers show that approximately 11,700 were executives, 5,500 were in the construction industry, 2,700 were operating personnel, and 3,600 were in technical fields.

Those interested in participating or visiting this Exposition should communicate with the Show Management, International Exposition Company, 480 Lexington Avenue, New York, N.Y., U.S.A., Charles F. Roth, Manager.

BATTERSEA POWER STATION will get its fourth chimney as a result of work begun by Taylor Woodrow Construction Limited on Monday, November 27.

Acting for the British Electricity Authority the contractors are to finish the construction of the station which was delayed by the war.

HALIFAX CORPORATION DEVELOPMENT COMMITTEE expect to receive from the Ministry of Town and Country Planning authority to acquire the site for an industrial estate at Holmfield.

"WHEN WE DIFFER, WE AGREE TO DIFFER. Then, in due time, we agree to agree." This is the secret underlying the absence of major strike or lockout in the Building Industry over a quarter of a century, according to Mr. G. H. A. Hughes, Director of the L.M.B.A.

Opening a discussion on Labour relations in the building industry at the Southern Area General Meeting in Croydon, Mr. Hughes said that while they had not yet achieved perfection, they had in the past thirty years built up an organisation for joint discussion and the amicable settlement of difficulties which might well be an object-lesson to other industries.

SENIOR STUDENTS varying in ages from 16½ to 19, and three masters from the King's Lynn Technical Institute, paid an afternoon visit to London recently to see, as the guests of the L.M.B.A., something of the new building which is going on in the capital. The party was taken on a two-hours tour of the F. G. Minter site in New Oxford Street.

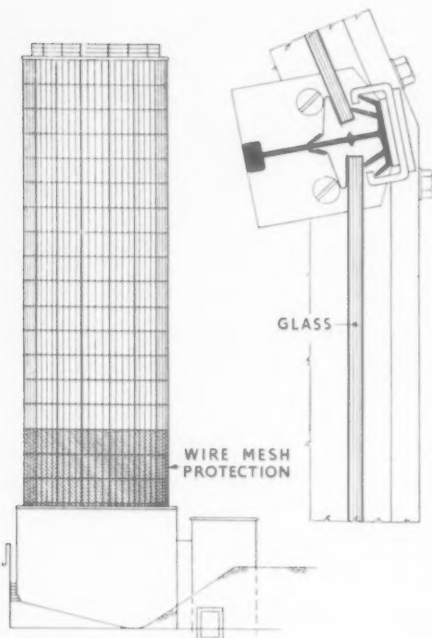
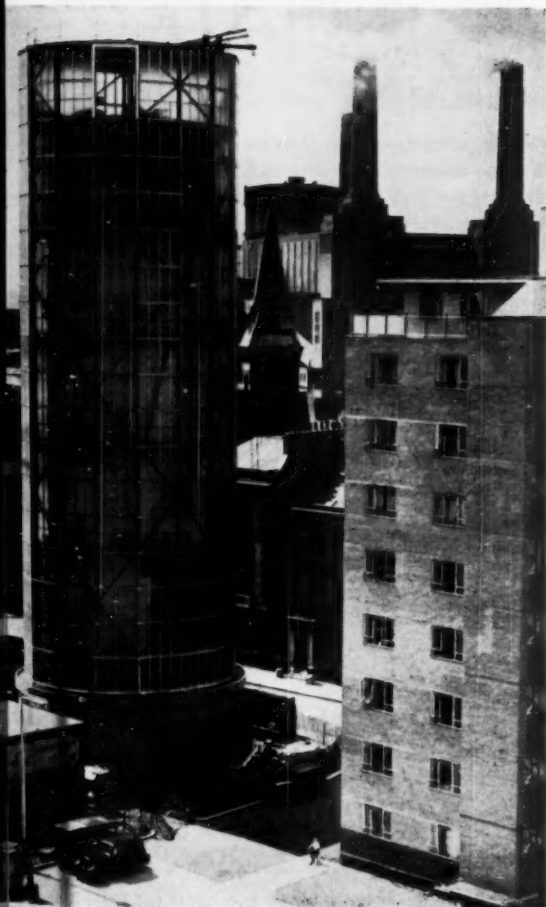
A NEW PAPER in the series prepared on behalf of the Technical Committee of the National Brick Advisory Council is published for the Ministry of Works. It is No. VI, "Clay Brickmaking in Great Britain—A Survey of the Methods Used," by A. Miller, B.Sc., A.R.I.B.A. Obtainable from H.M. Stationery Office, price 3s. net.

Nos. I and II of these Papers ("The Getting of Clay" and "Labour Requirements in Brickmaking") were published in 1947, and No. V ("Clay Building Bricks of the United Kingdom") in May of this year.

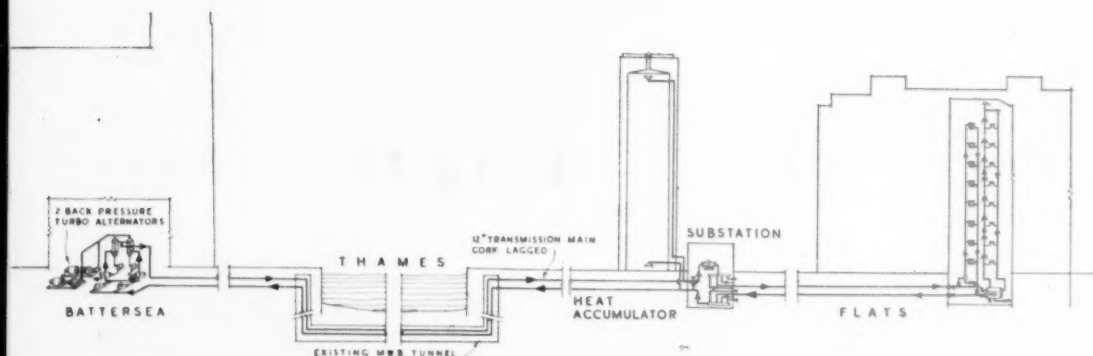
A further Paper (No. IV "The Firing of Common Bricks") by W. Noble, B.Sc., A.R.I.C. and A. T. Green, O.B.E., F.R.I.C., F.INST.P., will appear in the near future.

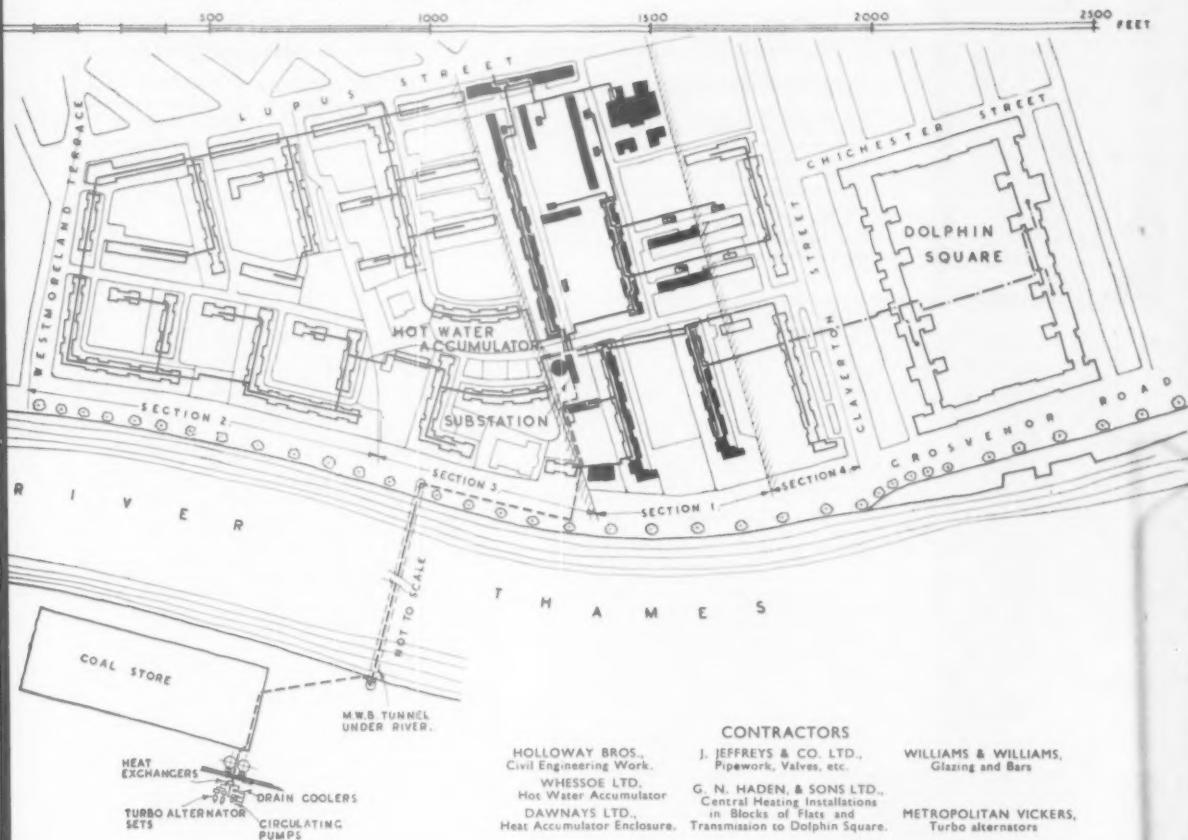
DISTRICT HEATING PIMLICO

In the news again are the Pimlico flats where the first two blocks of section I of the first public heat supply in London is now in operation. The scheme illustrated here is the first to use by-products of electricity generation.

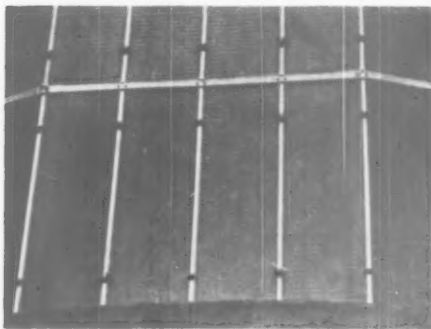


The photograph above shows Battersea station where two back pressure turbo-alternators each designed for an output of 1,350 k.w. taking steam at 600 lbs. per sq. inch and 800-850 deg. F. are each connected to a heat exchanger. This heats water to 200 deg. which then passes to the heat accumulator tower by 12 in. cork lagged flow and return pipes beneath the river. See section below and plan. From the accumulator the hot water is pumped in the pumping station (in the lower left of the picture) to the flats at temperatures controlled to suit weather conditions. The hot water supply is based on a consumption of 15 gallons per head per day at 130 deg. F. Hot water for baths and basins is supplied from two large calorifiers in each block. The estimated weekly cost for heating and hot water per flat to the tenant is 6s. 7d. for two rooms k. & b.; 8s. for three rooms k. & b.; 9s. 5d. for four rooms, k. & b.





The heat accumulator is a cylinder 126' 0" high by 29' 0" diameter with ring bracing but without cross reinforcement built up of mild steel plates, varying in thickness from $\frac{1}{8}$ " at the top to $\frac{1}{2}$ " at the base, and electrically welded in situ. The shell is insulated with 3" cork slabs fixed by steel studs welded to the outer surface. The tank is enclosed in a steel framed skeleton glazed with clear $\frac{1}{2}$ " rough cast glass in patent aluminium glazing bars, polished and anodised. See detail on facing page. The glazing starts 30 feet from the base of the cylinder and rises a further 108 feet in 16 tiers each 6' 0" high. The glazing rails form a polygon of 16 facets. The lower tiers are protected from stone throwing, etc., by wire mesh panels (see detail below left) hinged to allow for cleaning the glass.



ARCHITECTS

Powell and Moya

CONSULTING ENGINEERS

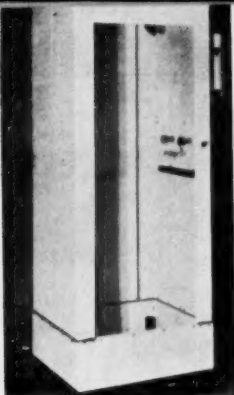
Kennedy and Donkin



GAS APPLIANCES

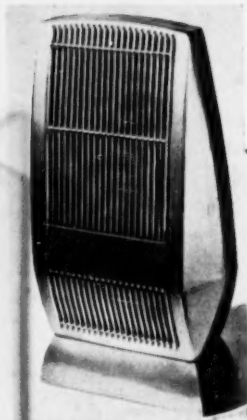
FITTINGS—SINKS, BATHS, ETC. C 2.4

The four items illustrated on this page are new products in a comprehensive display of gas equipment installed at the Building Centre, Conduit Street, by the Gas Council. For the bathroom this gas-operated shower cabinet in cream enamel finish takes up minimum floor space. A gas water heater built on to the side of the cabinet provides constant hot water. The base of the cubicle can be used as a bath for small children. The cabinet measures 3 ft. 2 ins. wide (including the heater) and 2 ft. 3 ins. deep. The price is £45 plus £3 7s. 6d. purchase tax.



SERVICES—HEATING B 3.5

This new flueless gas heater, which provides warmed air for halls, etc., is designed to show the elements through the grille thus providing an added feeling of warmth. The grille, which also acts as a fireguard, is of aluminium. The heater is silent in operation. Gas consumption can be rated either at 12 or 16 cubic ft. per hour. The price is £7 11s. 3d. (plus £4 3s. 10d. purchase tax).



FITTINGS—GAS COOKERS C 6.1

This comparatively recent design of gas cooker is intended for the large household, restaurant, hotel or canteen. The overall width is 30 ins. An extra wide oven, 23½ ins. wide x 16 ins. deep, is a feature of the design, which enables two dishes to be placed side by side on each shelf. The oven door is counter-balanced drop-type. The hot-plate has five boiling burners and a 10 in. grill. The price complete with full size splash back and plate rack as illustrated is £57.



FITTINGS—GAS COOKERS C 6.2

The price of this new cooker is not yet fixed but it has been designed to sell at a moderate figure. The finish is all white vitreous enamel including the central hot plate. The gas taps are the push-in safety type. A thermostatic oven control is well placed in a clearly visible central position over the oven door. The oven measures 17 ins. x 15 ins. deep and has a drop type door. In the plinth base there is a small cupboard with lift-up door for storing cake tins, etc. The burners are cast in pairs and are interchangeable.



MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Associate Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS

Interest (continued)

SIR ROBERT SINCLAIR, President of the Federation of British Industries was in grave mood when speaking to Scottish members in Glasgow on November 30.

After referring to the high level of taxation which was due to Government expenditure, Sir Robert said "I am no alarmist... but I believe our present situation is critical; and the sooner that is generally realised the better."

Sir Robert hoped that in facing the coming problems, the full implications of which were not yet worked out, Industry would be consulted.

One of the first jobs of the F.B.I., the President said, was to try to piece together the current experience of various industries and to encourage everywhere a true appreciation of the facts.

"Our economy must be braced to take the strain of increased expenditure on Defence: ... A policy which seeks to pay the price by further taxation is mortgaging our future."

In conclusion Sir Robert stresses the need for giving reasonable reward—"and I mean reasonable reward *retainable*"—for better or harder work, for skill and for enterprise.

STRAMIT BOARDS, LIMITED, announce the appointment of Mr. G. W. H. Haines, of 269 Ferndale Road, Swindon, as their Technical Representative for the Southern counties

THE MINISTER OF WORKS, Mr. R. R. Stokes, M.P., is to be the guest of honour of the L.M.B.A. at a luncheon in the Park Lane Hotel on January 18, the day of the Association's Annual Meeting. Mr. R. R. Costain, C.B.E., will preside.

THE NATIONAL COUNCIL OF THE N.F.B.T.E. recently nominated the under-mentioned members of the Council for election as National Officers for 1951 by the Annual General Meeting of the Federation to be held on January 31, 1951. President: Councillor Stephen Hudson, of Sunderland. Senior Vice-President: Mr. J. Ian Robertson, of Burton-on-Trent. Junior Vice-President: Mr. E. W. Garrett, of London; Mr. G. W. Grosvenor, of Bath; Mr. W. Horsfall, of Liversedge, Yorks.

Mr. G. W. Buchanan, C.B.E., of London, was nominated for re-election as Hon. Treasurer.

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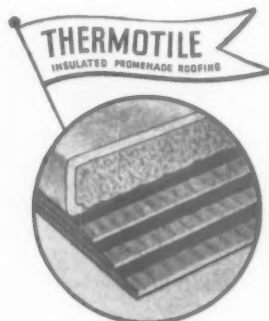
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GOOD, BAD OR INDIFFERENT ?

By A. FOREMAN

No. 14

LAST week I mentioned some factors about working in frosty weather and gave some special remarks on bricklaying. This week I want to continue by discussing concreting.

The basic cause of trouble, both for brickwork and concreting, is the effect of temperature on the setting and gaining of strength of the binder, particularly of cement. This may be met by using rapid hardening cement or high alumina cement, but of course these two must never be mixed together. You can speed up the setting of both ordinary and rapid hardening cement when used for concrete but not when used for mortar, by the addition of calcium chloride at the rate of 2 to 2½ lbs. per bag of cement. The calcium chloride should be weighed out carefully as too much is troublesome and any less than this quantity is of very little value. Care must be taken as to how you use it as there are two types of calcium chloride, firstly the lumpy form, which has to be dissolved in the mixing water, and secondly the flake form, which is best added to the aggregate. Calcium chloride must not be put into high alumina cement.

Covering up the work is the most valuable precaution whatever type of mix is used. The idea of covering is to prevent the concrete cooling too fast. The covering should be hessian, tarpaulins or similar material, but it is wise to use some form of insulation under the covering such as a thick layer of straw. In weather which is cold but not severely frosty two or three layers of building paper may give a sufficient protection. The form work, if in timber, usually gives good protection but if it is of metal it is much less satisfactory and should itself be protected. I have seen jobs abroad where large parts of the structure are enclosed by attaching tarpaulins to the scaffolding and installing braziers to maintain the temperature inside the enclosure at between 40 and 50 degrees F. I have also seen steam used to supply jets at regular intervals over the surface of the concrete. The surface of the concrete should not be allowed to fall below 40 degrees F. and it is better that the temperature should be higher as any increase in temperature speeds up hardening. The temperature during setting affects very severely the time which has to be allowed before form work is struck. At about 40 degrees F. the time is about double that needed at normal temperatures round 60 degrees F.

There are many points to be watched when mixing and placing concrete in cold weather and the cooler it is the more care and precautions must be taken. Firstly, all materials, including the formwork and reinforcement, must be free from frost. Secondly, the temperature of the mix may fall very considerably between the mixer and the placing in position if it is wheeled in barrows or delivered in chutes for long distances exposed to the air and cold winds in particular. Lastly, mixers and tools must be kept warm and free of frost.

In concreting, especially in larger jobs, the amounts of material to be handled are much larger than for mortar for brickwork, referred to last week, so that more complicated procedures are needed.

The easiest means of heating concrete is to use hot water and this may be up to a temperature of 120-160 degrees F. When mechanical mixers are being used the amount of hot water needed is quite large so that a supply

tank to feed the mixer should be rigged and this heated from some source which will heat the water as fast as it is likely to be drawn off. In medium size jobs this will require a coke boiler and in larger jobs a steam boiler to supply coils or jets in the tank.

Aggregates in large quantities are very difficult to heat and the best method is to use steam jets and keep turning part of the pile as it is heated. Aggregate piles should be covered to protect them against frost and to keep them reasonably dry. Do not heat cement.

There are two very useful booklets on this subject issued by H.M.S.O. at 2d. each, called "M.O.W. Advisory Leaflet No. 7. Concreting in cold weather" and "No. 8. Bricklaying in cold weather," which have a lot

of information and some very helpful sketches. There is also a rather more comprehensive publication, namely Bulletin No. 3 in the National Building Series (H.M.S.O. 6d.) "Concreting and bricklaying in cold weather." I have tried out some of the methods recommended and in a particular instance, which I well remember, the result was that an urgent job went on almost as usual and no troubles have since arisen in spite of very hard frost. The cost and organization involved did not prove to be nearly as great as reading about them may suggest but what is really important is that the job goes on and the men do not have to stand-off or be diverted to other work. The important point, however, is to have the equipment ready so as to be able to take the precautions when the frosty weather comes.

CONCRETE MIXING & PLACING—4

By ROLT C. HAMMOND, A.C.G.I., A.M.I.C.E.

IN the last few years intensive study has been devoted to methods of placing concrete and much has been achieved, especially by the Ministry of Works.

The Ministry has wisely pointed out that mechanization is not merely a matter of providing machines, but rather that it calls for completely new methods by which the machinery can be used to the best effect. At the Field Test Unit, it has been found that the output of concreting gangs varies between 0.11 and 0.37 cu. yd. per man hour, averaging with a gang of six men and a 7½ mixer 0.19 cu. yd. per man hour and with eight men and a 10/7 mixer 0.21 cu. yd. per man hour. Detailed studies have proved that the greatest output from a 10/7 mixer operating with wheelbarrows is achieved when six barrowmen are used. The highest output per man and the lowest costs are attained with three barrowmen, when the average length of barrow run is less than 40 yds., and with six barrowmen only when the barrow run is longer than this. Teams including two, four or five barrowmen are shown to be uneconomical.

The research has also shown that wherever navy barrows are employed to take the discharge from a 10/7 mixer, output from the mixer is seriously reduced; it takes about 15 seconds to fill a navy barrow at the mixer, including positioning it and getting it out of the way for the next one. It must, therefore, take not less than 1½ or 1¾ minutes to fill the five or six barrows required to take away the full mix from the mixer, and if any of the barrows are delayed it will take longer.

A three-wheeled motorized barrow has recently been subjected to field trials. This machine was developed from a Ministry of Works prototype and will carry 7 cu. ft. of concrete—the output of a 10/7 mixer—over rough ground, surmounting brick footings and crossing trenches with the aid of simple ramps and bridges. Although performance over rough ground is somewhat limited by wheel spin, bad ground can be

crossed quite easily by employing B.R.C. mesh or similar material.

The following result was achieved on a housing site near London, where concrete was being placed and screeded for ground floors. With a team of seven men, the powered barrow, and a 10/7 mixer, 30.6 cu. yd. of concrete were mixed and placed in 8½ hours, which included the time for moving the mixer into position and all necessary preparation work and cleaning up, and all non-productive time. Output was at the rate of 0.5 cu. yd. per man hour, and the total plant and labour costs were 6d. 7d. per cu. yd.; running costs of the powered barrow amounting to 1s. 9d. per hour. It is assumed that the machine has a life of five years, during which time it works 18 hours a week for 36 weeks in the year, with maintenance at 20 per cent. and interest at 4 per cent. per annum of the capital outlay. In contrast, plant and labour costs with navy barrows, observed on many other sites, range from about 10s. to 22s. and average about 15s. per cu. yd.

A recent development in transporting concrete, which should be of great value in all kinds of building construction, is a mono-rail transporter. This system makes use of driverless wagons with or without trailer capacity, each containing 11 cu. ft. of concrete. The wagons run on a single rail carried on adjustable stands so that irregularities in the ground can normally be accommodated without special packing up. The trains can negotiate curves of 12-ft. radius and a gradient of 1 in 18, straight rails being normally supplied in 12-ft. lengths which are easily handled by two men, the 12-ft. radius curves being in 6-ft. lengths.

A mono-rail system can be quickly extended or shortened, assembled and dismantled without the use of any bolts or nuts, special bog plates being employed for passing over soft ground. Barrows, dumpers, or similar equipments are eliminated, the driver being released for other work; running cost is claimed to be very low, about 6s. per day for

petrol and oil for each train. On short-distance work of from 50 to 100 yds. a single track with shuttle service is frequently employed, but for longer distances and where large quantities of materials have to be moved, a return track and multiple trains must be installed.

The concrete pump is a well-established means of placing concrete, which has given excellent results in a wide variety of building and constructional work. This has been developed to a high pitch of efficiency by a firm who claim that the method will eliminate wagons, chutes, hoists, towers, buckets, cranes and shovels; the pump is of extremely robust construction with self-contained power unit, the pipes can be laid rapidly and easily, and concrete can be pumped in any direction required.

This method was employed on the construction of the South Bank Concert Hall in London. It has also been employed with great success for tunnel lining without causing any interruption to railway services, a vital consideration where the traffic is heavy and the occupation time is therefore limited.

COSTING OF BUILDING WORK

by
S. Howard Withey

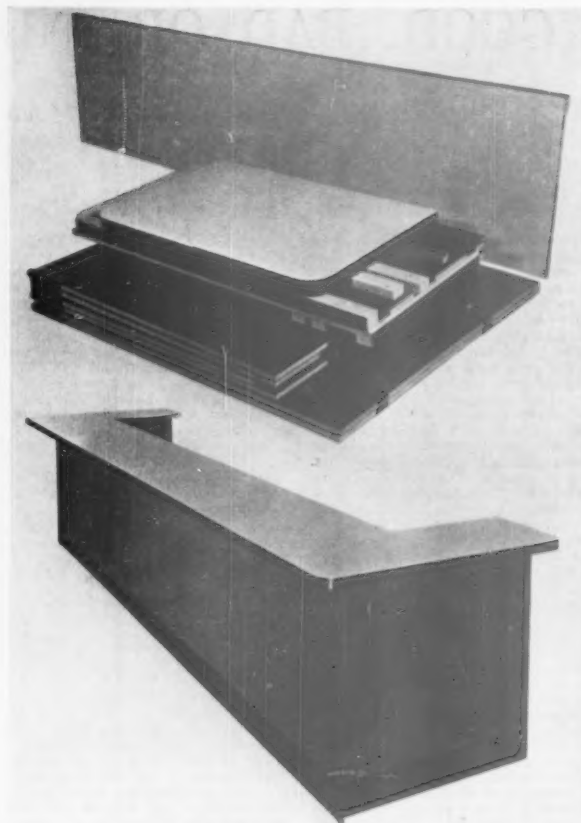
Plant maintenance and repair records usually comprise the depot and site machine repair labour abstract, the depot fitter's weekly time sheet, the stores requisitions and vouchers and the site fitter's time sheet, and when the job sheet is made out in duplicate and distributed to the shop foreman or fitter it will be returned duly signed on completion of the job, the copy being retained by the head office supervisor.

In addition to the job number and a detailed description of the equipment to be used, the precise nature of the work to be done should be given, together with the names of the fitters and the starting and finishing dates, and as the purpose of the depot fitter's weekly time sheet is to build up the cost of the labour expended on each unit of plant, the entries made on the sheet should be certified daily; if daily sheets are provided they should be handed in at the cost office at the end of the week.

Details such as name, check number, job numbers, and the number of hours worked each day should be regarded as essential, and the total weekly pay would have to be dissected to show the wage, extras, bonus and expenses based on the effective rate per hour actually worked.

As a rule, depot machine repair labour abstracts are made out in the cost office for the purpose of ascertaining the weekly cost of repairs to each unit or section of plant, and when this is the case the totals may be carried forward to weekly cost summaries. The units of equipment, the machine numbers, job numbers, and the fitters' names should be shown, and in the case of site machine repair labour abstracts the name and number of the contract should appear.

Equipment such as concrete mixers, breakers, tanks, mechanical loaders and transporters, etc., can be grouped under suitable headings for the purpose of facilitating control, but such records must provide the kind of information likely to be required. A rearrangement will sometimes make it possible to reduce the number of units and reduce maintenance costs and at the same time install the remainder of the equipment to much better advantage. Records of loose plant



THE WAREITE TRANSPORTABLE BAR

So far as architects are concerned this transportable bar comes in the category of occasional furniture. In the same way that nesting chains can be used to adapt a room. To many users this bar should prove invaluable for use in assembly halls, etc., for occasional public gatherings, dances, etc. Details and sizes were given in a previous issue.

such as shovels, rakes, winches and electrical units are usually made on cards which can be housed in a cabinet or drawer where they should be maintained in position by means of a steel rod or other similar device.

In some cases it may be found that the number of units under a given heading is greater than is called for; in other cases, the records may show that building work is being retarded by an insufficiency of the right types. Plant records not only facilitate the determination of amounts to be charged under the heading of Depreciation; they are the means whereby claims in such matters as fire and other insurances can be substantiated. Several styles of card are in use at the present time, and one of the most satisfactory is indicated below:

BUILDER'S PLANT RECORD
ELECTRICAL DRILL Motor: Universal 200-220 volts; Chuck Speed 450-600 r.p.m. Suitable for Masonry Drilling.

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Location.....
Maker's Name..... No.....
Estimated Service Life..... Years
Annual Rate of Depreciation..... %
(Back of Card)

Book Value as at19..
Less Depreciation

Reduced Value
Additions

Book Value as at19..
Less Depreciation
Reduced Value
Additions

Book Value as at19..
Less Depreciation
Reduced Value
Additions

Book Value as at19..
Less Depreciation
Reduced Value
Additions

Columns or sections are sometimes provided for inserting the invoiced cost of acquisition, the carriage inwards charges and the expenses incurred in transporting to sites, and many builders now maintain detailed and elaborate records arranged in alphabetical order, the cards being of a convenient size—such as 8 ins. by 4 ins.

As one of the largest items in costs falls under the heading of Depreciation, my next article will discuss various methods of computation and accounting which are now being applied by builders in various parts of the country.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

OPEN

BARROW-IN-FURNESS B.C. (a) R.C. secondary school. (b) Borough Engineer. (c) 2 Gns. (e) December 19.

BLACKPOOL B.C. (a) Secondary school, Bispham Road. (b) Borough Surveyor. (c) 2 Gns. (e) January 2.

BURNLEY B.C. (a) St. Stephen's junior school. (b) Leach, Rhodes and Walker, 15 Manchester New Road, Middleton, Lancs. (c) 2 Gns. (e) December 18.

DARTFORD B.C. (a) 62 Dwellings, site 4 Temple Hill Estate. (b) Borough Surveyor, Barclays Bank Chambers, High Street. (c) 2 Gns. (e) January 1.

ERITH B.C. (a) 102 Flats in 11 blocks, Abbey Wood. (b) Borough Engineer. (c) 2 Gns. (e) January 1.

GRIMSBY B.C. (a) Boys' school, girls' school. (b) Borough Engineer, Municipal Offices, Town Hall Square. (c) 5 Gns. (d) December 13. (e) January 13.

LONDON, STEPNEY B.C. (a) 162 Dwellings, Sidney Street Housing Scheme. (b) Gleeds, 106 Regent Street, W.1. (c) 2 Gns. (e) December 28.

MAIDSTONE B.C. (1) South Borough County School, Boughton Lane. For Kent Education Committee. Government consent granted.

MAIDSTONE B.C. (1) Additions. (2) The Poplars Eventide Homes for the Aged, Tonbridge Road. For Richardson & Buckley Ltd. on behalf of the Rev. Garfield Vale.

MAIDSTONE B.C. (1) Water gas plant, etc. Laboratory and test room. (2) St. Peter's Street. For South-Eastern Gas Board.

MAIDSTONE B.C. (1) Workshop and Store building, Lenfield Avenue. For South-Eastern Electricity Board.

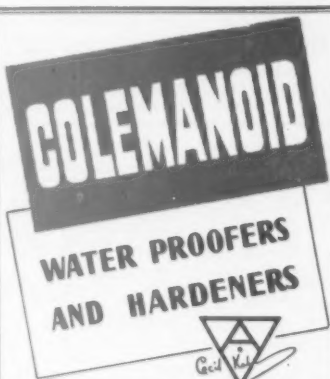
MONMOUTHSHIRE C.C. (a) Infants' school, Duketown, Tredegar. (b) The County Architect, Queen's Hall, Newport. (c) 5 Gns. (e) December 18.

NORTHERN IRELAND HOUSING TRUST. (a) 289 Houses, etc., Bangor; 74 houses, etc., Portrush; 39 houses, etc., Kells. (b) Trust Offices, 12 Hope Street, Belfast. (c) 3 Gns. each scheme. (e) December 20.

ROCHDALE B.C. (a) 207 houses, Kirkholt Estate. (b) Borough Surveyor. (c) 5 Gns. (e) December 30.

WALSALL B.C. (a) Forest Secondary school. (b) Architects, H. H. Lavender, Son & Close, 65 Upper Bridge Street, Walsall. (c) 4 Gns. (e) January 5.

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address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.

***WIDNES B.C.** (a) Fairfield Boys' Secondary School. (b) Borough Architect, Brendan House, Widnes Road. (d) December 18.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

†**BRIGHTON CORPORATION.** (1) Primary school. (2) Coldean. (3) Saunders (Contractors) Ltd., London Road, Burgess Hill, Sussex. (4) £296,865.

***MANCHESTER, Y.M.C.A.** (1) Hostel and club. (3) Gerrard & Sons Ltd. Swinton. (4) £130,000.

***STOCKPORT E.C.** (1) Secondary school. (2) Vale Road. (3) Moston Brick & Building Co. Ltd., Kenyon Lane, Manchester. (4) £165,943.

†**READING CORPORATION.** (1) Primary school. (2) Emmer Green. (3) Harry Russell, Reading Road, Woodley, Berks. (4) £52,245.

†**CAMBERWELL B.C.** (1) 186 flats. (2) Lordship Lane. (3) Kirk & Kirk Ltd., Atlas Works, London, S.W.15.

***ROTHERHAM T.C.** (1) 72 houses. (2) Broom Valley Estate. (3) O. Weaver & Sons Ltd., Harlington Road, Mexborough. Borough Architect is Mr. E. J. Mason.

***SWINTON AND PENDLEBURY U.D.C.** (1) 100 houses. (2) Clifton Neighbourhood Unit. (3) U.D.C. Direct Labour Dept. (4) £109,107.

†**ASHFORD R.D.C.** (1) 132 houses. (3) G. E. Wallis & Sons Ltd., Broadmead Wharf, Maidstone. (4) £171,181.

†**BEXLEY B.C.** (1) 64 houses, 12 flats. (2) Royal Park Estate. (3) S. G. & A. Agomber, 353a, Norwood Road, London, S.E.27. (4) £95,804.

***LIVERPOOL CORPORATION.** (1) 170 houses, Croxteth; 12 shops, houses, flats, Speke Estate. (3) Unit Construction Co. Ltd., Benthall Drive.

†**SUTTON-IN-ASHFIELD U.D.C.** (1) 142 houses, 26 bungalows. (2) Mansfield Road. (3) M. D. Sweeney & Palmer Ltd., Apsley, Nottingham. (4) £201,000.

†**COVENTRY CORPORATION E.C.** (1) Central College of Art and Technology. (3) E. Harris & Son, 50 Cope Street. (4) £112,697.

†**BARNESLEY T.C.** (1) School. (2) Summer Lane. (3) John Holmes (Builders) Ltd., 54 Queens Road, Doncaster. (4) £35,163.

BUILDING

AIR MINISTRY. (1) Maintenance work. (3) W. B. & F. T. Archer, Birmingham.

AIR MINISTRY. (1) Maintenance work. (3) Bosworth & Wakeford Ltd., Daventry.

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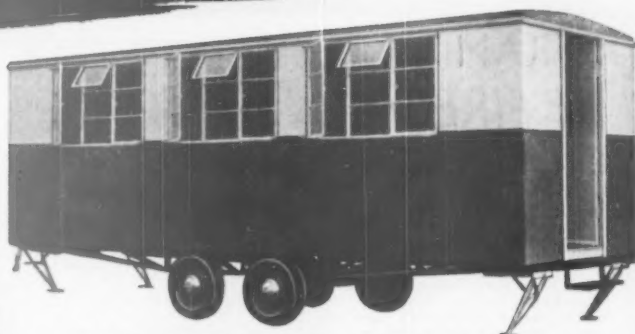
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MANCHESTER : Ayres Road, Old Trafford. Trafford Park 1725

SITEMASTER MOBILE OFFICES



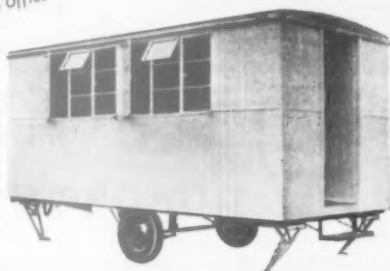
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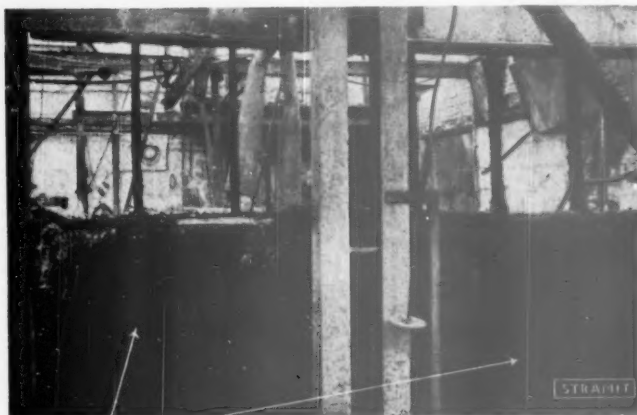
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STRAMIT AND FIRE ...

This STRAMIT screen survived unharmed in a recent London Factory fire, except for the cardboard lining which was burnt off. A fibreboard ceiling and the felt covered timberboarded roof were burnt away. All timber framing was deeply charred, and some broke, causing a STRAMIT noise-reducing ceiling to fall down. Although partly broken up, the STRAMIT slabs did not continue to burn once the paper lining was gone.

The straw that has been teased out from the corners of the slab showed up clean and unaffected by the heat.

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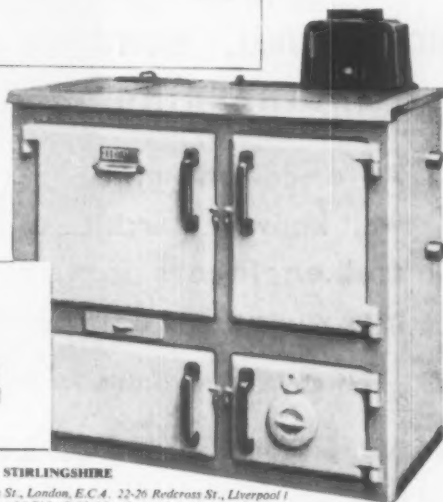
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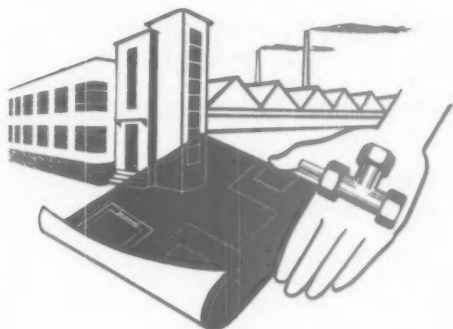
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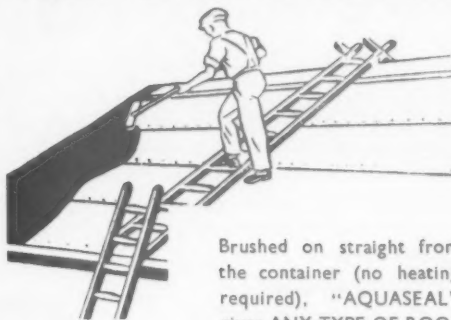
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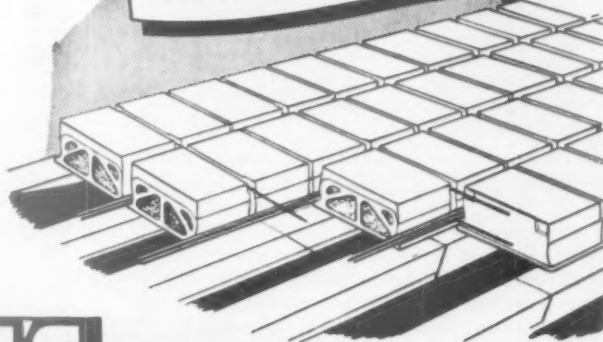
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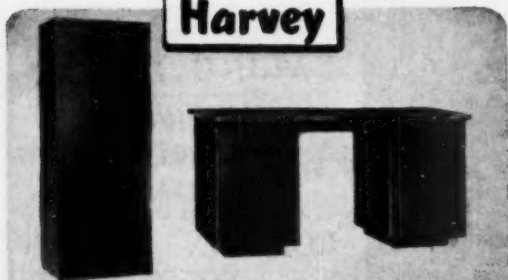
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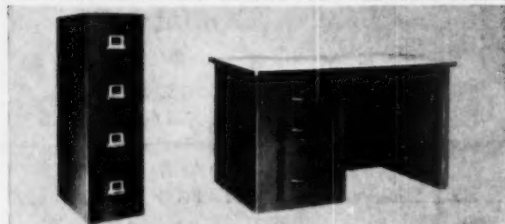
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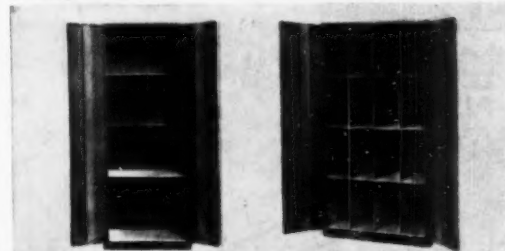
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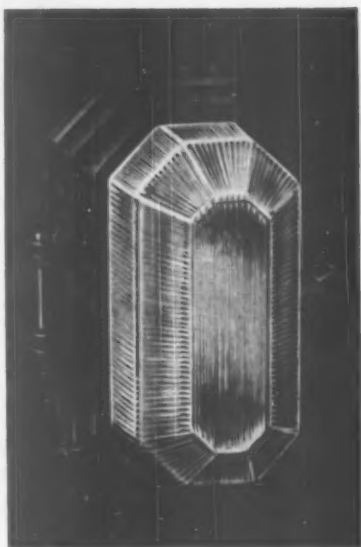
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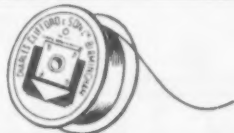


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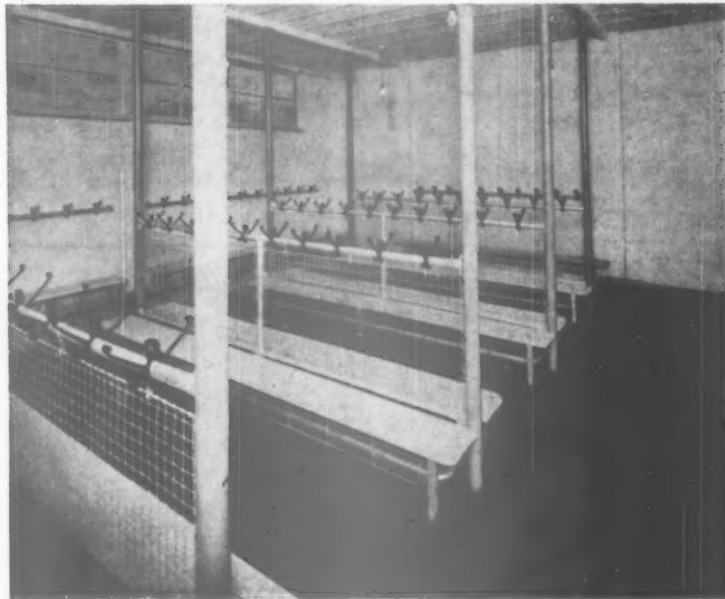


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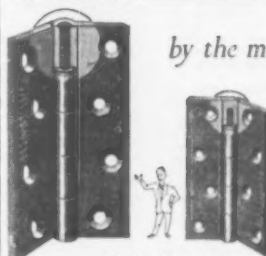
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All of these salaries carry an additional interim wage increase of £18 5s. 0d. N.Z. per annum.

Full details of conditions of contract, transportation and accommodation allowances, also application forms, are available on request from:

The High Commissioner for New Zealand, 415 Strand, London, W.C.2.

with whom completed applications, in duplicate, should be lodged not later than 10th December, 1950. Consideration will, however, be given to late applications received before the 10th January, 1951. [5029]

LONDON COUNTY COUNCIL.

APPLICATIONS are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £880 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats) and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifieds. (816). [0101]

COUNTY BOROUGH OF GREAT YARMOUTH.

BOROUGH ENGINEER'S DEPARTMENT.

APPOINTMENT OF SENIOR ASSISTANT ARCHITECT.

APPLICATIONS are invited for the appointment of a SENIOR ASSISTANT ARCHITECT in the Borough Engineer's Department. Salary A.P.T. Grade VI (£595-£660). Candidates should be Associates of the Royal Institute of British Architects, but need not have had previous Local Government experience. The appointment will be terminable by one month's notice on either side and will be subject to the provision of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

Housing accommodation will be offered to the successful applicant, if married.

Applications, stating age, qualifications and experience, together with the names of three persons to whom reference could be made, should be enclosed in an envelope endorsed "Senior Assistant Architect," and must be received by me not later than Friday, 22nd December, 1950. Canvassing will be deemed a disqualification and candidates must disclose in writing any relationship to any member or holder of any senior office under the Council. Candidates who fail to do so will be disqualified, and, if appointed, will be liable to dismissal without notice.

FARRA CONWAY, Town Clerk.
Town Hall, Great Yarmouth.
1st December, 1950. [5058]

READVERTISEMENT BOROUGH OF ROYAL TUNBRIDGE WELLS.

THE Council invite applications for the appointment of the following—
ARCHITECTURAL ASSISTANT, GRADE V.
Salary in accordance with the National Scale, A.P.T. V (£520-£570).

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, and to the selected candidate passing a satisfactory medical examination.

Applicants should state whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating experience and qualifications, together with the names of two persons to whom reference may be made, to be submitted to the Borough Surveyor and Water Engineer not later than 10 a.m. on Saturday, 23rd December, 1950. (Signed) JOHN WHITEHEAD, Town Clerk, Town Hall, Tunbridge Wells. 15063

CITY AND COUNTY OF KINGSTON UPON HULL.

CITY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for ASSISTANT ARCHITECTS, A.P. and T. Grade V (£520-£570).

The appointment will be subject to one month's notice on either side to the National Scheme of Conditions of Service.

Application forms, obtainable from the undersigned, should be returned on or before 27th December 1950.

ANDREW RANKINE, A.R.I.B.A., City Architect, Guildhall, Kingston upon Hull, 20th November, 1950. 15049

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

SCHOOLS DIVISIONS.

APPLICATIONS are invited for positions of ARCHITECT, Grade II (£700-£840), ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new schools and major alterations and extensions to existing schools. The positions are supernumerary. Candidates for Grades II and III should possess professional qualifications—Application forms obtainable from the Architect (A.R.E.K.S.), The County Hall, S.E.1 (enclosing stamped addressed foolscap envelope), to be returned by 10th December, 1950. Canvassing disqualifies. (15091) 15053

LONDON ELECTRICITY BOARD.

QUANTITY SURVEYOR'S ASSISTANT (WORKER-L.P.)

APPLICATIONS are invited for the above position in the Architect's Section of the Chief Engineer's Department at Lescro House, Stamford Street, S.E.1.

Applicants must have had experience in working up in all trades and the successful candidate will be on the staff of a Chartered Quantity Surveyor.

Pending grading of the post under the national agreement of the appropriate negotiating body, the provisional salary will be between £250 and £350 per annum, according to qualifications and experience.

Application forms obtainable from Establishment Officer, 46 New Broad Street, E.C.2, on receipt of addressed envelope, to be returned duly completed within 7 days. Please quote ref. EST/V/1005/AA on envelope and all correspondence. 15054

LEYLAND URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPT ARCHITECT.

APPLICATIONS are invited for the above vacancy. The salary will be up to A.P.T. Grade VII (£710 p.a. max.) according to qualifications and experience. Housing accommodation will be made available if necessary. Applicants must be qualified architects, preferably with experience of quantity work.

Applications, stating full name, age, qualifications, training, past and present employment and experience, and the grade applied for, together with the names of two persons to whom reference can be made, should be sent immediately to the Engineer and Surveyor, Council Offices, Leyland, Lancs. in an envelope suitably endorsed. (Closing date the 16th December, 1950).

Candidates must disclose in writing if they are related to any member or senior officer of the Council. Canvassing, either directly or indirectly, will disqualify.

T. K. CLAYTON, Clerk of the Council, Council Offices, Leyland, Lancs. 10th November, 1950. 15061

COUNTY BOROUGH OF GREAT YARMOUTH.

APPOINTMENT OF CLERK OF WORKS.

APPLICATIONS are invited for the appointment of CLERK OF WORKS to act under the direction of the Borough Engineer in the supervision of the erection of six-storey flats.

Applicants should have a thorough knowledge of the building trade, of steel frame building and pile foundations. Membership of the Incorporated Clerk of Works Association of Great Britain would be an advantage.

The salary will be £12 per week.

Applications, stating age, qualifications and previous experience, together with copies of three testimonials, should be enclosed in an envelope endorsed "Clerk of Works" and must be received by me not later than Friday, 22nd December, 1950.

Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in writing whether, to their knowledge, they are related to any member, or holder of any senior office under the Council. Candidates who fail to do so will be disqualified and, if appointed, will be liable to dismissal without notice.

FARRA CONWAY, Town Clerk.

Town Hall, Great Yarmouth. 15057

URBAN DISTRICT COUNCIL OF CORBY.

ENGINEER AND SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the undermentioned appointments on the permanent staff of the Engineer and Surveyor.

(1) ASSISTANT ARCHITECT. The salary will be in accordance with training and experience and will be as follows—

For Registered Architects with less than six years' experience in an Architect's office or at a School of Architecture, Grade V, A.P.T. Division (£520-£570).

Registered Architects with six or more years' experience in an Architect's office or at a School of Architecture, Grade Va (£550-£610) or VI (£595-£660), according to qualifications and practical experience.

Candidates must have previous experience of the design of buildings, preparation of working drawings, building details and estimating.

(2) TRACER/DRAUGHTSMAN (MALE OR FEMALE). Salary in accordance with Grade III, Miscellaneous Division of the National Scale of Salaries (£315 to £375).

Applicants must be neat and expeditious Draughtsmen, well experienced in the tracing of Architectural and Engineering Drawings and tracing from ordinance maps, and must be able, also, to undertake lettering thereon of a high standard.

Housing accommodation will be made available to the selected married candidates, if required. The provisions of the Local Government Superannuation Act, 1937, will apply to both appointments.

Forms of application can be obtained from the undersigned, and requests therefore should indicate the position for which application is being made. Completed forms must be received not later than noon on Friday, the 22nd December, 1950.

G. B. BLACKALL, Clerk of the Council, Council Offices, Corby, Northants. 15060

KENT COUNTY COUNCIL.

APPLICATIONS are invited for the appointment in the Buildings Department of an ARCHITECTURAL ASSISTANT at a salary within A.P.T. Grades II-III (£420-£495).

Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects and have had experience in the preparation of working drawings and development of detail drawings.

The commencing salary will be dependent upon the experience of the successful candidate.

The post is supernumerary and the successful candidate will be required to pass a medical examination.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be delivered to him within two weeks of the appearance of this advertisement.

W. L. PLATTIS,

Clerk of the County Council, County Hall, Maidstone. 23rd November, 1950. 15042

CONTRACTS

BOROUGH OF WIDNES.

EDUCATION COMMITTEE.

FAIRFIELD BOYS' SECONDARY MODERN SCHOOL.

CONTRACTORS desirous of tendering for the erection of the above School are invited to submit their names to the Borough Architect, Brendan House, Widnes Road, Widnes, not later than the 18th December, 1950.

The work comprises the complete erection of the School, which will provide accommodation for 340 pupils.

The following information should be supplied—

(a) Brief particulars of constructional works in hand or completed since the war, for Local Authorities, Government Departments, Public Undertakings, or private clients;

(b) An assurance that the applicant has the necessary financial and material resources and the organisation to carry out the work.

Bills of Quantities and Form of Tender, together with relevant details as to the date and time for receipt of tenders, will be forwarded to selected applicants in due course.

FRANK HOWARTH, Town Clerk.

Town Hall, Widnes. 15087

ARCHITECTURAL APPOINTMENTS VACANT

SCHERRER & Hicks, F.R.I.B.A., of 19 Cavendish Square, W.1, require two Assistants of Intermediate standard in January, 1951. Salary by arrangement. Museum 1105. 15050

ARCHITECTURAL Assistant required. Intermediate R.I.B.A. standard. Industrial and general work. Write, stating age, experience, qualifications and salary required—Apply Cotton, Ballard & Blow, Architects and Surveyors, Norman Road, North Shields. 15056

REQUIRED immediately, experienced Architectural Assistants. High salary according to ability. Five-day week. Knowledge of industrial work an advantage—Apply Ley Colbeck & Partners, F.R.I.B.A., 51 Bishopsgate, E.C.2. Telephone: London Wall 2917. 15059

OLYMPIA Ltd. require a Junior Assistant aged 20-25, to assist in dealing with large Exhibition Contracts. Applicants must have good personality and possess knowledge of Building Construction and Surveying. Commencing salary £350 p.a.—Reply, stating age and experience, in writing to the Estates Manager, Olympia Ltd., Kensington, W.14, which applications will be treated in the strictest confidence. 15064

PARTNERSHIPS

PRACTISING Architect, F.R.I.B.A., M.Inst.R.A., with pleasant office at excellent London, W.C., address at moderate cost, seeks colleague who has work on hand, to share the accommodation, and who would like to work in association with a view to Partnership. If accommodation not required advertiser would also be interested in purchase of active partnership in well established London firm.—Box 7470, The Architect and Building News. 15062

INSURANCE

ARCHITECTS' Indemnity Insurance effected.—Please write for Proposal Form to J. SAXBY, Incorporated Insurance Broker, 37a Carfax, Hove, Sussex. Tel. 990 14980

FOR SALE

ALL Mouldings, Plain and Embossed, and Embossed Ornaments. Numerous designs.—Davey's Moulding Mills Ltd. 60 Fowndall Road, Dalston, E.8. 15086

STEEL framed, single storey, Industrial Buildings for sale, complete with covering. 184ft. x 188ft., 188ft. x 100ft., and 188ft. x 84ft.—Sharnham, 5 Victoria Street, S.W.1. 15036

BUILDER'S Business for sale. Freehold yard, plant and machinery. Bedford lorry stock, etc. £5,980. Open to offer.—Receiver, c/o Martin, Rata & Co., 44 Hatton Garden, E.C.1. HOL. 3170. 15034

SLASH deadweight—Increase insulation, "Dohm Vermiculite" for concrete, plastering and lining in schools, flats, factories, power stations and kilns.—Dohm Ltd., 167 Victoria Street, London, S.W.1. 10104

FOR SALE

NISSEN Type Huts, ex-Government stock, reconditioned and supplied ready for erection. All sizes in 6ft. multiples, 36ft. x 16ft., £71 10s. 0d. and £59 1s. 0d.; 24ft. x 16ft., £50 12s. 0d. and £41 16s. 0d.; 22ft. x 16ft., £134 4s. 0d. and £106 14s. 0d. Delivered U.K. Plasterboard Huts and other buildings. Some 24ft. span Nissens.—Write, call or telephone, Universal Supplies (Beivedere) Ltd., Dept. 32, Crabtree Manorway, Beivedere, Kent. Tel. No. Erith 2946. [10057]

FOR SALE, Eight Steel Compound Plate Girders of riveted and welded construction, each approximately 50ft. long x 36in. deep x 14in. wide, web plates about 1in. thick, top and bottom plates about 1in. thick. Further details and price upon request.—Thos. W. Ward Ltd., Albion Works, Sheffield. [15055]

FOR SALE, Sommerfeld Wire Netting, second-hand, in good condition, in rolls about 25 yards long x 10ft. wide—12/13 G. Wire forming approx. 1in. Hexagonal Mesh. Price 50s. per roll at our Sheffield Works. Carriage charges extra.—Thos. W. Ward Ltd., Albion Works, Sheffield. [15057]

SITUATIONS VACANT

A MAJOR Persian Gulf oil company requires (a) a Quantity Surveyor's Assistant to be employed in the Persian Gulf. To have had at least seven years' experience in a Quantity Surveyor's office, be capable of taking off, abstracting, billing, preparing estimates from drawings, measuring work on site, settling accounts, and able to prepare small sub contracts and write specifications. Age under 35. Salary starting £650 p.a. clear, free messing and accommodation, kit allowance, pension scheme. (b) Quantity Surveyor's Assistant for work in London office, but must be prepared to work abroad for periods up to six months at a time. Will assist in taking off and checking quantities, quotations, materials lists, estimates, also follow up inquiries, orders, etc. Must possess at least National certificate in building construction and have previous experience in a Quantity Surveyor's office. Age 22-28, salary minimum £150 p.a. but according to age and experience. Luncheon scheme, pension scheme.—Write, giving brief details and in case (a) quoting K.131, and (b) L.C.164, to Box "J.C." c/o J. W. Vickers & Co. Ltd., 7/8 Great Winchester Street, London, E.C.2. [15065]

ARCHITECTURAL Draughtsman required for Architect's Department of large Iron and Steel Works. Applicants should be aged 22-35 years, should be capable of preparing working drawings with a minimum of supervision, sound knowledge of modern construction and building services essential. Some experience of industrial work preferred. Apply the Labour Manager, Appleby-Frodingham Steel Co., Branch of The United Steel Cos., Scunthorpe, Lincs. [15052]

ARCHITECTURAL Metal Workers require a Designer-Draughtsman of considerable merit. Top salaried position for skilled m.n.—Apply The Morris Singer Company, Hope House, St. Peter Street, Westminster, S.W.1. [10095]

BUILDING Sectional Engineer required by Persian Gulf oil company for overseas service. Should be A.M.I.C.E. or possess degree in Civil or Civil Mechanical Engineering. Should have few years' experience construction of roads, buildings, sewers, water supply, etc. Age under 35. Salary starting £850 p.a. clear. Free messing and accommodation, kit allowance, pension scheme.—Write, giving details age, experience, etc., and quoting K.1070, to Box "R.S." c/o J. W. Vickers & Co. Ltd., 7/8 Great Winchester Street, London, E.C.2. [15066]

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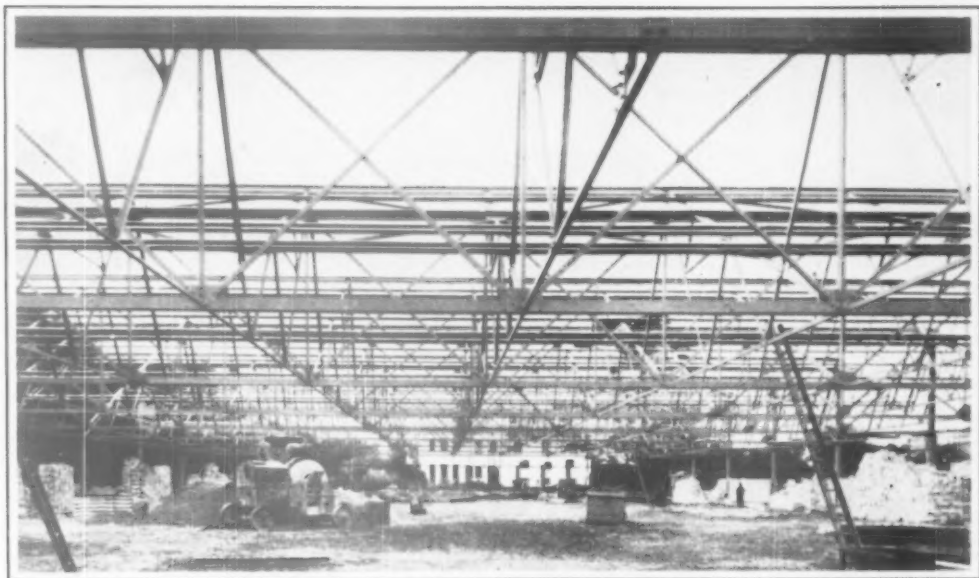
Apply: James Barr & Son, Surveyors, 213, St. Vincent Street, Glasgow, C.2. Telephone Central 5158.

For permission to view and further detailed information, apply to Mr. Edwin Graham, Mitchell Street, Newcastle-on-Tyne, 6. Telephone Wallsend 64021.

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